

(6 pages)

Reg. No. : .....

Code No. : 30048

Sub. Code : J 1 TL 11/  
S 1 TL 11

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

First Semester

Part I—Tamil

பொதுத் தமிழ் தாள்— I

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

பகுதி அ — (10 × 1 = 10 மதிப்பெண்கள்)

அனைத்து வினாக்களுக்கும் விடை தருக. சரியான விடையைத் தேர்ந்தெடுத்தெழுதுக.

1. 'ஆத்திசூடி யினம்பிறை யணிந்து மோனத் திருக்கு முழுவெண் மேனியான்' - யார்?  
(அ) திருமால்  
(ஆ) பிரம்மா  
(இ) சிவன்  
(ஈ) இந்திரன்

2. 'கண்டும் காணாமல்' என்னும் கவிதையை எழுதியவர் இவர் \_\_\_\_\_  
(அ) பா. விஜய் (ஆ) கல்யாண்ஜி  
(இ) ஈரோடு தமிழன்பன் (ஈ) உமா ஹரிஹரன்
3. கட்டெழுத்துக்கள் எத்தனை?  
(அ) 3 (ஆ) 4  
(இ) 5 (ஈ) 7
4. பொருள் தருக. 'ஆழி'  
(அ) மழைத்துளி (ஆ) கடல்  
(இ) ஒரு விலங்கு (ஈ) கருவி
5. இருந்தும் இல்லாதிருப்பது எது?  
(அ) அன்பு (ஆ) வாய்மை  
(இ) பொறுமை (ஈ) அடக்கம்
6. தமிழில் 'நிர்வாகம்' முக்கியத்துவம் பெற்ற காலம் \_\_\_\_\_  
(அ) முதல் சங்க காலம்  
(ஆ) இடைச்சங்க காலம்  
(இ) சங்கம் மருவிய காலம்  
(ஈ) கடைச்சங்க காலம்

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7. தமிழ்ச் 'சிறுகதை வேந்தன்' என்றழைக்கப்படுபவர்  
 (அ) புதுமைப்பித்தன்  
 (ஆ) ந. பிச்சமூர்த்தி  
 (இ) ஜெயகாந்தன்  
 (ஈ) வல்லிக்கண்ணன்
8. குடும்ப உறவுகள் சிதைந்து வரும் சூழலில் கிராமத்துப் பின்னணியைக் கொண்டு அமைந்த சிறுகதை  
 (அ) மனோபாவம் (ஆ) சேதாரம்  
 (இ) ஒரே நண்பன் (ஈ) வசக்குதல்
9. தமிழ் நாடகத் தந்தை என்று அழைக்கப்பட்டவர்  
 (அ) சங்கரதாஸ் சுவாமிகள்  
 (ஆ) அறிஞர் அண்ணா  
 (இ) பம்மல் சம்பந்த முதலியார்  
 (ஈ) கலைஞர் மு. கருணாநிதி
10. தமிழில் தோன்றிய முதல் புதினம் இது  
 (அ) பிரதாப முதலியார் சரித்திரம்  
 (ஆ) சுருண சுந்தரி  
 (இ) பிரேம கலாலத்யம்  
 (ஈ) கமலாம்பாள் சரித்திரம்

பகுதி ஆ — (5 × 5 = 25 மதிப்பெண்கள்)

அனைத்து வினாக்களுக்கும் 250 சொற்களுக்கு மிகாமல் விடையளிக்க. வினா (அ) அல்லது (ஆ) தேர்ந்தெடுக்க.

11. (அ) பெருஞ்சித்திரனாரின் 'கனிச்சாறு' எவ்வாறு நலத்தைக் கூட்டி நலிவைப் போக்குகிறது?  
 (அல்லது)  
 (ஆ) 'ஆசைப்படு' என்ற கவிதை தரும் அறிவுரைகளைப் பட்டியலிடுக.
12. (அ) லகர, முகர, ளகர வேறுபாடுகளைச் சான்றுடன் தருக.  
 (அல்லது)  
 (ஆ) மொழி இறுதி எழுத்துக்களை விளக்குக.
13. (அ) திருவாசகத்தில் மகளிர் விளையாட்டுக்கள் பற்றி சுருக்கி வரைக.  
 (அல்லது)  
 (ஆ) அற இலக்கியங்களில் மேலாண்மை குறித்து எழுதுக.
14. (அ) வல்லிக்கண்ணன் ஆசிரியர் குறிப்பு தருக.  
 (அல்லது)  
 (ஆ) பொன்னகரம் கதை உணர்த்தும் கருத்தினைப் புலப்படுத்துக.



15. (அ) தமிழ்ப் புதுக்கவிதையின் வளர்ச்சியினை விளக்குக.

(அல்லது)

(ஆ) தமிழ் நாடகத்தின் வகைகளை எழுதுக.

பகுதி இ — (5 × 8 = 40 மதிப்பெண்கள்)

அனைத்து வினாக்களுக்கும் 600 சொற்களுக்கு மிகாமல் விடையளிக்க. வினா (அ) அல்லது (ஆ) தேர்ந்தெடுக்க.

16. (அ) 'நாட்டியல் நாட்டுலோம்' என்பதில் பாரதிதாசன் கூறும் நடைமுறைகள் பற்றிக் கட்டுரைக்க.

(அல்லது)

(ஆ) 'அப்துல் கலாமின் வீணை' தரும் செய்திகளை விவரி.

17. (அ) முதலெழுத்துக்கள் யாவை? விளக்குக.

(அல்லது)

(ஆ) சுட்டெழுத்துக்கள், வினாவெழுத்துக்கள் பற்றி விவரி.

18. (அ) 'அறநூல்கள் செப்பும் சூழலியல் சிந்தனைகள்' பற்றிக் கட்டுரைக்க.

(அல்லது)

(ஆ) புதுக்கவிதைகள் தரும் விழிப்புணர்வுச் சிந்தனைகளை எழுதுக.

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19. (அ) கு அழகிரிசாமியின் 'ராஜா வந்திருக்கிறார்' சிறுகதை கூறும் கருத்தினை விளக்குக.

(அல்லது)

(ஆ) பாவண்ணனின் 'ஆறு' சிறுகதையின் கருத்தினைப் புலப்படுத்துக.

20. (அ) தமிழில் சிறுகதையின் தோற்றமும் வளர்ச்சியும் பற்றி விவரி.

(அல்லது)

(ஆ) புதின இலக்கியத்தின் வகைகள் குறித்து கட்டுரை வரைக.

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Reg. No. : .....

Code No.: SS32049

Sub. Code : J1TL21/S1TL21

UG (CBCS) DEGREE SPECIAL SUPPLEMENTARY EXAMINATION, April - 2020

Second Semester

PART – I – Tamil

Pothu Tamil – Paper II

(For those who joined in July 2016 onwards)

Time: Three hours

Maximum: 75 marks

பகுதி — அ (10 X 1 = 10 மதிப்பெண்கள்)

அனைத்து வினாக்களுக்கும் விடை தருக. சரியான விடையைத் தேர்ந்தெடுத்தெழுதுக.

1. அரக்கனார் அருவரை எடுத்தவன் அலறிட நெருக்கியவர் யார்?  
(அ) பிரம்மன் (ஆ) திருமால்  
(இ) சிவன் (ஈ) இந்திரன்
2. பெருமாள் திருமொழியைப் பாடியவர் யார்?  
(அ) நக்கீரர் (ஆ) குலசேகர ஆழ்வார் (இ) பெரியாழ்வார் (ஈ) திருப்பாணாழ்வார்
3. கீழ்க்காணும் சொற்களில் திருந்திய சொல்லைத் தேர்ந்தெடுக்க.  
(அ) அண்ணாக்கயிறு (ஆ) அர்ணாக்கயிறு (இ) அர்ணைக்கயிறு (ஈ) அரைஞாண்கயிறு
4. கீழ்வருவனவற்றில் பெயர்ச்சொல் எது?  
(அ) வந்தான் (ஆ) பாடியது (இ) குடம் (ஈ) செல்க
5. 'இலக்கிய விமர்சனத்தின் தத்துவங்கள்' என்ற நூலை எழுதியவர் யார்?  
(அ) அபர்க்ரோம்பி (ஆ) ரோமன் ரோலான் (இ) ஸ்மித் டன் (ஈ) பார்க்கர்
6. 'தெம்மாங்கு பாவலன்' என்று புகழப்படுபவர் யார்?  
(அ) பாரதியார் (ஆ) பாரதிதாசன் (இ) கவிமணி (ஈ) ந.பிச்சமுர்த்தி
7. கவிமணியின் தாய் பெயர் யாது?  
(அ) தனலட்சுமி அம்மாள் (ஆ) லஷ்மி அம்மாள்  
(இ) ஜெகதாம்பாள் (ஈ) ஆதிலட்சுமி அம்மாள்
8. பாலும் தேனும் பருகுவது போன்று கவிமணிக்கு ஆர்வத்தைத் தருவது எது?  
(அ) வீணை மீட்டல் (ஆ) சாசன ஆராய்ச்சி  
(இ) மொழிபெயர்ப்பு (ஈ) பாடல் புனைதல்
9. பெரியபுராணத்தை இயற்றியவர் யார்?  
(அ) மாணிக்கவாசகர் (ஆ) திருநாவுக்கரசர் (இ) திருஞானசம்பந்தர்  
(ஈ) சேக்கிழார்
10. ஆசாரக் கோவையில் எத்தனை பாடல்கள் உள்ளன?  
(அ) 60 (ஆ) 80 (இ) 100 (ஈ) 120



பகுதி — ஆ (5 X 5 = 25 மதிப்பெண்கள்)

வினா (அ) அல்லது (ஆ) தேர்வு செய்து எழுதுக.  
அனைத்து வினாக்களுக்கும் 250 சொற்களுக்கு மிகாமல் விடை தருக.

11. (அ) திருஞானசம்பந்தர் இறைவனைப் பற்றி கூறும் கருத்துக்களைக் கூறுக.  
(அல்லது)  
(ஆ) நும் பாடப்பகுதியிலுள்ள திருநாவுக்கரசரின் பாடற்கருத்துக்களை விளக்குக.
12. (அ) வினைச்சொல்லின் பொது இலக்கணத்தை வரையறை செய்க.  
(அல்லது)  
(ஆ) உரிச்சொல் பற்றி விளக்குக.
13. (அ) 'மனிதனைப் பண்படுத்துவது கலை' என்னும் கூற்றை நிறுவுக.  
(அல்லது)  
(ஆ) நம் வருங்காலப் பணிகள் பற்றி தனிநாயகம் அடிகள் கூறுவது யாது?
14. (அ) கவிமணியின் பிறப்பும் இளமையும் பற்றி எடுத்துரைக்க.  
(அல்லது)  
(ஆ) கவிமணியின் பெருமைகளுக்குரிய காரணங்களுள் ஒன்றாகக் கருதப்படும் அன்புடைமையை ஆராய்க.
15. (அ) இன்னா நாற்பது, இனியவை நாற்பது பற்றி விளக்குக.  
(அல்லது)  
(ஆ) முதலாழ்வார் மூவர் பற்றி எடுத்துரைக்க.

பகுதி — இ (5 X 8 = 40 மதிப்பெண்கள்)

வினா (அ) அல்லது (ஆ) தேர்வு செய்து எழுதுக.  
அனைத்து வினாக்களுக்கும் 600 சொற்களுக்கு மிகாமல் விடை தருக.

16. (அ) கள்ளாண்மை பற்றி திருக்குறள் வலியுறுத்தும் கருத்துக்களைத் தொகுத்துரைக்க.  
(அல்லது)  
(ஆ) நட்பாராய்தல் பற்றி நாலடியார் கூறும் செய்திகளைத் தருக.
17. (அ) பெயர்ச்சொல் என்றால் என்ன? அதன் வகைகளைச் சான்றுடன் விளக்குக.  
(அல்லது)  
(ஆ) வினையெச்சம், வினைமுற்று பற்றி ஆராய்க.
18. (அ) நாயன்மார்களின் பக்திச் சிறப்பினைப் புலப்படுத்துக.  
(அல்லது)  
(ஆ) பழந்தமிழரின் பண்பாட்டுச் சிறப்புகளை ஆராய்க.
19. (அ) கவிமணியின் கல்வியும் தொழிலும் பற்றி விளக்குக.  
(அல்லது)  
(ஆ) கவிமணியின் பொதுநலத் தொண்டினை விளக்குக.
20. (அ) திருக்குறளின் பெருமைகளை எடுத்துரைக்க.  
(அல்லது)  
(ஆ) சைவசமயக்குரவர் நால்வர் பற்றி விளக்கியுரைக்க.

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Reg. No. : .....

Code No.:SS23038

Sub. Code : J2EN21/S2EN21

U.G. (CBCS) DEGREE SPECIAL SUPPLEMENTARY EXAMINATION, APRIL 2020

Second Semester

GENERAL ENGLISH-Paper II

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 X 1 = 10 marks)

Answer ALL questions, Choose the correct answer

1. \_\_\_\_\_ Is the most offensive traveller according to J B Priestly  
(a) children (b) middle aged women (c) sea fearers (d) soldiers
2. The dominion of the Manchus ended in the year \_\_\_\_\_  
(a) 1910 (b) 1911 (c) 1912 (d) 1913
3. The mother recovers after \_\_\_\_\_ hours of pain and agony from the bite of the scorpion.  
(a) 10 (b) 14 (c) 20 (d) 24
4. The poem if by Rudyard Kipling was written in the year \_\_\_\_\_  
(a) 1895 (b) 1896 (c) 1897 (d) 1898
5. The title \_\_\_\_\_ was conferred by the mathematics teacher to Wasserkopf  
(a) Mathematical Genius (b) Scientific Scholar (c) Math Wizard  
(d) Business Tycoon
6. Jack earns \_\_\_\_\_ pounds a week  
(a) 5 (b) 6 (c) 7 (d) 8
7. Change the following sentence in active voice "The window pane has been broken by the children."  
(a) The children have broken the window pane.  
(b) The children had broken the window pane.  
(c) The children had been breaking the window pane.  
(d) The children has been breaking the window pane.
8. Identify the type of sentence "He had studied French before travelling to Paris".  
(a) Past tense (b) Past continuous (c) past perfect  
(d) past perfect continuous
9. \_\_\_\_\_ is a way of recording important details from a source  
(a) Note Making (b) agenda (c) minutes (d) essay
10. \_\_\_\_\_ is an example for salutation  
(a) Sir (b) hai (c) halo (d) see you



PART B — (5 × 5 = 25 marks)  
Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

11.(a) Explain the travellers on the wrong train as cited by J.B. Priestly.

OR

(b) How does the source of water reflect the mood of the person according to C.V. Raman?

12.(a) "Our two souls, therefore, which are one" Explain with reference to John Donne's poem "Valediction: Forbidding Mourning"

OR

(b) How did the peasants view the scorpion stinging in a positive manner?

13.(a) How does the play Never – Never Nest portray the demerits of buying things on hire-purchase basis?

OR

(b) What prompted Wasserkopf to go to his school seeking a refund of his tuition fee?

14.(a) Change the voice to its other forms.

- (i) The science class viewed the comet.
- (ii) Instructions will be given to you by the director.
- (iii) Thousands of tourists visit the Grand Canyon every year.
- (iv) The house was remodeled by the homeowners to help it sell.
- (v) The saltwater corroded the metal beams.

OR



b. Fill the gaps with the correct tenses.

i) I (learn) \_\_\_\_\_ English for seven years now.

ii) But last year I (not//work) \_\_\_\_\_ hard enough for English, that's why my marks were not really good then.

iii) As I (pass/want) my English exam successfully next year, I am going to study harder this term.

iv) During my last summer holidays, my parents (send) \_\_\_\_\_ me on a language course to London.

v) It (be) \_\_\_\_\_ great and I think I learned a lot.

15 a. Write a letter to your friend Ramani inviting him to spend the summer vacation at your place in Ooty. Assuming that You are Mani.

Or

b. Develop the following lines into a story:

Long ago there was an old man in a village. He was very interested in yoga. On a certain day he saw some yoga teacher conducting yoga classes in the field .....

**PART C – (5 X 8 = 40 Marks)**

**Answer ALL questions choosing either (a) or (b)**

**Each answer should not exceed 600 words.**

16 a. Why do you think the tiger had not heard the approach of the night train? Why was escape useless for the tiger?

Or

b. How can we free ourselves from dogmatism?

17 a. "Mary Moorman" calls the poem Lucy Gray as *the most haunting of all his ballads of childhood*. Discuss.

Or

b. Analyse the message rendered by the poem *IF*.

18 a. What was unusual about Jack's owning his car?

Or

b. Discuss in detail the structure of the play *Bishop's Candlesticks*?

19 a. Fill in the blanks with appropriate forms of tenses:

i) She used to \_\_\_\_\_ with furniture but now she \_\_\_\_\_ with cars (deal, deal)

ii) He \_\_\_\_\_ his homework. He can go out now. (just do)

iii) Our cows \_\_\_\_\_ more milk recently (give)

iv) It was hot yesterday. The children \_\_\_\_\_ swimming. (go)

v) Since his departure to France I \_\_\_\_\_ any news from him (not hear).

vi) The ball \_\_\_\_\_ me on the head and I went to the ground (hit)

vii) Please \_\_\_\_\_ on the shirt! I don't like it (keep)

viii) She was lying in her bed when the phone \_\_\_\_\_ (ring).

Or

b. Write the following sentences in reported speech.

i) Ram: "She works in an office."

ii) Jane: "I am going to clean the room."

iii) John: "They like the song."

iv) Ram and Laxman: "We need new shoes."

v) Kate: "He can speak Spanish."

vi) Teacher: "Ravi has never been to Philadelphia."

vii) Latha: "The train didn't arrive on time."

viii) Emma: "I'm sitting on the chair."



20 a. Sita is being interviewed for the job of a teacher in a school. Complete the dialogue by filling in the gaps.

Interviewer: Why do you think you (i) \_\_\_\_\_?

Sita: Mam, I am qualified for the job and I have a passion for children and teaching. All these traits make me \_\_\_\_\_ (ii)

Interviewer: Can (iii) \_\_\_\_\_ any foreign language?

Sita : Yes, I can speak and write German.

Interviewer: What (iv) \_\_\_\_\_ in graduation?

Sita: Mam, I have graduated in Chemistry Honours.

Interviewer: Do you (V) \_\_\_\_\_ experience?

Sita: Yes, I have five years of teaching experience in a school.

Interviewer: Well, then we may consider you for the job.

Or

b. Develop the following hints into a readable passage and give a suitable title.

Ram – actor – brilliant - strange character - insists on realism - headache to the manager - a new drama - first drinking scene - water provided in a cup as usual - Dick insists on liquor - manager has to buy a bottle of liquor - second scene – fight - insists on real swords - refuses to handle wooden swords - steel swords brought - third scene - hero drinks poison - manager has real poison - actor in a fix - promises to be sensible in future.

(6 pages)

Reg. No. : .....

Code No. : 40546 E      Sub. Code : JACA 11/  
SACA 11

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

First Semester

Computer Application — Allied

DIGITAL DESIGN

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A Boolean function may be transformed into
  - (a) logical diagram
  - (b) logical graph
  - (c) map
  - (d) matrix

2. A binary variable can take values
  - (a) 0 only
  - (b) 0 and -1
  - (c) 0 and 1
  - (d) 1 and 2
3. Two variables will be represented by
  - (a) eight minterms
  - (b) six minterms
  - (c) five minterms
  - (d) four minterms
4. Adjacent squares represents a
  - (a) circle
  - (b) variable
  - (c) literal
  - (d) minterm
5. One that is a universal gate
  - (a) AND
  - (b) NAND
  - (c) OR
  - (d) NOT
6. Four gates in a package is called
  - (a) biruple
  - (b) octuple
  - (c) dualruple
  - (d) quadruple
7. Output sum of two decimal digits can be represented in
  - (a) Gray code
  - (b) Excess-3
  - (c) BCD
  - (d) Hexadecimal

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8. Addition of two decimal digits in BCD can be done through

- (a) BCD adder
- (b) Full adder
- (c) Ripple carry adder
- (d) Carry look ahead

9. Flip-flops can be constructed with two

- (a) NAND gates      (b) OR gates
- (c) AND gates      (d) NOT gates

10. RS flip-flops are also called

- (a) RS latch      (b) SR latch
- (c) TS latch      (d) ST latch

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define Boolean algebra based on huntington postulates.

Or

(b) Describe complement of a function with atleast two examples.

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12. (a) Discuss the five variables map and their impact on number of literals in the term.

Or

(b) Simplify the boolean functions in

- (i) sum of products
- (ii) product of sums

$$F(A, B, C, D) = \sum(0, 1, 2, 5, 8, 9, 10).$$

13. (a) Describe Full-Adder with its truth table and maps.

Or

(b) With a block diagram explain BCD Adder.

14. (a) Discuss and compare SR latch and D latch.

Or

(b) Analyze the clocked sequential circuit with JK flipflop.

15. (a) Describe the functions of Ring counter as a circular shift register.

Or

(b) Distinguish between single error correction and double error correction.

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[P.T.O]



PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) (i) Compare BCD codes and Gray codes  
(ii) Subtract with 10's complement.  
(1) 98342-1271  
(2) 3412-10525 and describe the steps involved in detail.

Or

- (b) With respect to digital systems explain the signed binary numbers in detail.
17. (a) (i) Discuss the uses of positive and negative logic polarities in gates.  
(ii) Explain the evolution of integrated circuits in three stages.

Or

- (b) Describe the role of digital logic gates in boolean functions with extension to multiple inputs.

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18. (a) (i) Explain 2-bit by 2-bit binary multiplier with suitable illustration.  
(ii) Explain "NOR operation is the dual of NAND operation".

Or

- (b) Implementing Exclusive -OR in odd functions and parity generation and error checking.
19. (a) Distinguish between flipflop analysis and JK flipflop analysis.

Or

- (b) Elaborate the working of decoders in discrete information representation.
20. (a) Describe the ROM, their types and PLDs with suitable examples.

Or

- (b) (i) Analyze the working of shift register in passing binary information.  
(ii) Describe the characteristics of universal shift register.

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Reg. No. : .....

**Code No. : SS 30547 E    Sub. Code : JACA 21/  
SACA 21**

B.C.A. (CBCS) DEGREE (Special Supplementary)  
EXAMINATION, APRIL 2020.

Second Semester

Computer Application – Allied

**MATHEMATICAL FOUNDATION FOR COMPUTER  
SCIENCE**

(For those who joined in July 2016 onwards)

Time : Three hours                      Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A set is a well defined collection of \_\_\_\_\_  
(a) Objects                      (b) Structures  
(c) Classes                      (d) Variables
  
2. Two sets  $A$  and  $B$  are mutually exclusive if  
(a)  $A \cup B = \text{null}$               (b)  $A - B = \text{null}$   
(c)  $A \cap B = \text{null}$               (d)  $B - A = \text{null}$



3. One-to-one function is also called as \_\_\_\_\_  
 (a) Subjection (b) Bijection  
 (c) Unijection (d) Injection
4. A function  $f:x \rightarrow y$  is a bijection iff there exists \_\_\_\_\_ function  
 (a) unique (b) special  
 (c) inverse (d) constant
5. The truth value of ' $m \vee n$ ' is false only if  
 (a)  $m$  is false (b)  $n$  is false  
 (c)  $m$  and  $n$  are false (d) none
6.  $p \vee (\neg p \wedge Q) \Leftrightarrow$   
 (a)  $p \wedge Q$  (b)  $p \vee Q$   
 (c) Both (a) and (b) (d) None
7. A vertex in a graph is also called as \_\_\_\_\_  
 (a) line (b) edge  
 (c) node (d) weight
8. A graph which can have both multiple edges and loops is called as \_\_\_\_\_  
 (a) multigraph (b) complete graph  
 (c) undirected graph (d) pseudograph

9. In a graph  $G$ , every \_\_\_\_\_ contains a path
- (a) vertex                      (b) walk  
(c) node                          (d) loop
10. The number of pendent vertices in a binary tree is \_\_\_\_\_
- (a)  $(n+1)/2$                       (b)  $2^n$   
(c)  $2n$                               (d)  $n(n+1)/2$

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

11. (a) Compute  $A-B, B-A$  and  $(A-B) \cup (B-A)$  given,  $A = \{1, 3, 4, 5, 7, 9\}$  and  $B = \{1, 2, 4, 6, 7, 8\}$ .

Or

- (b) If the number of elements in the sets  $A, B, C, B \cap C$  are  $a, b, c, d$  respectively, find the number of elements in  $(A \times B) \cup (A \times C)$ .

12. (a) Let  $A = \mathbb{R} - \{3\}$  and  $B = \mathbb{R} - \{1\}$ . Consider the function  $f: A \rightarrow B$  define by  $f(x) = (x-2)/(x-3)$ . Is 'f' one-one and onto? Justify your answer.

Or

(b) Show that  $f:R \rightarrow R$  defined by  $f(x)=x+5$  is bijection. Also find  $f^{-1}$ .

13. (a) Construct the truth table for the statement formula  $p \wedge \neg Q$ .

Or

(b) Construct the truth table to show that  $(p \rightarrow Q) \leftrightarrow (\neg Q \rightarrow \neg p)$  is a tautology.

14. (a) Define

(i) a graph

(ii) subgraph

Or

(b) Define

(i) simple graph

(ii) weighted graph

15. (a) Prove that in a Graph  $G$ , every walk  $u-v$  contains a path  $u-v$ .

Or

(b) Differentiate between undirected graph and directed graph.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)  
Each answer should not exceed 600 words.

16. (a) For any three sets  $A, B, C$  prove the following DeMorgan's Laws.
- (i)  $A - (B \cup C) = (A - B) \cap (A - C)$
  - (ii)  $A - (B \cap C) = (A - B) \cup (A - C)$

Or

- (b) Among the middle age men who read newspaper, 72% read English newspaper and 86% read Tamil newspaper. Find the percentage of middle age men who read both.
17. (a) Let  $A$  be the set of first three natural numbers A function is defined as  $f: A \rightarrow N$  by  $f(x) = x^2 + 1$ . Find
- (i) domain of  $f$ ,
  - (ii) range of  $f$
  - (iii) co-domain of  $f$
  - (iv)  $f(3)$
  - (v) pre-images of 2 and 4.

Or

- (b) Consider function  $f$  and  $g$  such that composite  $g \circ f$  is defined and is one-one. Find
- Are  $f$  and  $g$  both necessarily one-one?
  - Are  $f$  and  $g$  both necessarily onto, if  $g \circ f$  is onto?

18. (a) Construct truth table for the statement formula  $(p \vee Q) \vee (\neg p \wedge Q) \vee (P \wedge \neg Q) \vee (\neg p \wedge \neg Q)$ .

Or

- (b) Show that  $p \rightarrow (Q \rightarrow R) \Leftrightarrow p \rightarrow (\neg Q \vee R) \Leftrightarrow (p \wedge Q) \rightarrow R$ .

19. (a) The maximum number of edges among all  $n$  vertex graphs with no triangles is  $\lfloor n^2/4 \rfloor$ . Prove it.

Or

- (b) Let  $G_1(n_1, e_1)$  and  $G_2(n_2, e_2)$  be two disjoint graphs. Prove that
- $G_1 \cup G_2$  is a  $(n_1 + n_2, e_1 + e_2)$  graph
  - $G_1 \times G_2$  is a  $(n_1 n_2, n_1 e_2 + n_2 e_1)$  graph.



20. (a) Describe walk and path with respect to Graph connectively.

Or

- (b) Prove the following properties of the Binary tree
- (i) The number of vertices ' $n$ ' in a binary tree is odd
  - (ii) The number of pendant vertices in a binary tree is  $(n+1)/2$ .
-

(6 pages)

Reg. No. : .....

Code No. : 40670 E

Sub. Code : SACA 31

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Computer Application – Allied

DATA STRUCTURE

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Loops that contain loops are known as
- (a) Linear Loops
  - (b) Logarithmic Loops
  - (c) Divide Loops
  - (d) Nested Loops

2. One of the more useful variations of the sequential search is known as the
- (a) Sequential search
  - (b) Sentinel search
  - (c) Probability search
  - (d) Ordered lists search
3. A node contains data about a list, the data are known as
- (a) Metadata
  - (b) Key
  - (c) List
  - (d) Field
4. Random lists are sometimes called
- (a) Key Lists
  - (b) Ordered Lists
  - (c) Chronological Lists
  - (d) Circular Lists
5. \_\_\_\_\_ adds an item at the top of the stack.
- (a) Push
  - (b) Pop
  - (c) Overflow
  - (d) Underflow
6. A queue is a
- (a) Single List
  - (b) Linked List
  - (c) Circular List
  - (d) Linear List

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7. A tree consists of a finite set of elements called
- (a) Degree
  - (b) Branches
  - (c) Nodes
  - (d) Outdegree
8. The \_\_\_\_\_ traversal, the root node is processed first, followed by the left subtree and then the right subtree.
- (a) Breadth-first
  - (b) Pre order
  - (c) Post order
  - (d) In order
9. All of the data are held in primary memory during the sorting process.
- (a) Internal sort
  - (b) External sort
  - (c) Exchange sort
  - (d) Quick sort
10. A graph is a collection of nodes called
- (a) lines
  - (b) path
  - (c) edges
  - (d) vertices.

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain about Abstract data type model.
- Or
- (b) Write a note on open addressing collision resolution.
12. (a) Discuss about Linear list.
- Or
- (b) Explain about the Data Structure for Linked List.
13. (a) Discuss about stack.
- Or
- (b) Write a note on Queue Data Structure.
14. (a) List down the properties of binary trees.
- Or
- (b) Discuss about expression trees.
15. (a) Explain in detail about Quick sort.
- Or
- (b) Explain about Graph Storage Structures.

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[P.T.O.]





PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Briefly explain about Pseudocode.

Or

(b) Discuss about Sequential search.

17. (a) Explain about inserting a node in a Linked Lists.

Or

(b) Give an overview about Doubly Linked Lists.

18. (a) Briefly explain about infix to postfix transformation.

Or

(b) Discuss about the basic queue operations.

19. (a) Explain in detail about Binary Tree Traversals.

Or

(b) Discuss about Heap Algorithms.

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20. (a) Explain about External sorts.

Or

(b) Discuss about minimum spanning tree.

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Code No: SS30706E

Sub. Code: SACA41

B.C.A. (CBCS) DEGREE SPECIAL SUPPLEMENTARY EXAMINATION, APRIL 2020

FOURTH SEMESTER

COMPUTER APPLICATION - ALLIED

ACCOUNTING SOFTWARE TALLY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

Part - A (10 X 1 = 10 marks)

Answer all questions, choose the correct answer

1. .... function key is used to select company features  
a) F5 b) F7 c) F9 c) F11 *d) All the above*
2. Closing a company is called ..... a company  
a) **Shut a company** b) close the company c) Terminate a company d) Remove a company
3. .... provides complete details of all the purchases made in a particular tax period.  
a) Tally Purchase register b) Purchase register c) VAT Purchase register d) Purchase register for Tax
4. .... is a feature of VAT in Tally  
a) Predefined VAT classification b) Transaction tracking c) Print invoice d) all
5. TCS stands for tax collected at .....  
a) Stores b) Shipment c) Source d) Sales
6. A dealer of excisable goods is one who is registered under Central ..... Rules  
a) Goods b) Excise c) Purchase d) dealer
7. In tally, Tax deducted at source is available under .....  
a) Quick setup b) company setup c) tds setup d) TVs setup
8. Excisable goods must be ..... goods  
a) intangible b) tangible c) movable d) immovable
9. ESI refers to employee ..... Insurance  
a) Stable b) State c) Salary d) Slip
10. ~~Excisable goods must be ..... goods~~ ..... Number of masters should be created to record the employee details.  
a) ~~intangible~~ b) ~~tangible~~ c) ~~movable~~ d) ~~immovable~~  
a) 5 b) 4 c) 3 d) 2

Part B (5 x 5 = 25 Marks)

Answer all Questions, Choosing either (a) or (b), Each answer should not exceed 250 words

11. a) Discuss about the technical advantages of tally (or)  
b) Write the various steps in the creation of Ledger
12. a) Discuss about the company features in tally. (or)  
b) Explain VAT rates
13. a) List the features of TCS (or)  
b) Explain TDS Process
14. a) Explain Excise stock register (or)  
b) Discuss about the basic concepts in excise duty
15. a) Explain the salient features of payroll in tally. (or)  
b) Discuss about Attendance voucher



Part C (5 x 8 = 40 Marks)

Answer all Questions, Choosing either (a) or (b), Each answer should not exceed 600 words

16. a) Discuss about the features of Tally (or)  
b) Explain creating a new company
17. a) Explain VAT returns forms (or)  
b) Explain VAT classification
18. a) Explain the various TDS reports (or)  
b) Discuss about the TDS computations
19. a) Explain enabling excise in tally (or)  
b) Discuss about the purchase of Excise goods
20. a) Discuss about the creation of employee ESI master (or)  
b) Explain the Payroll reports

(8 pages)

Reg. No. : .....

Code No. : 22542 B Sub. Code : JCSB 5 A/  
SCSB 5 A

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Fifth Semester

Part IV

Common Skill Based Subject — PERSONALITY  
DEVELOPMENT

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. முதல் ஆளுமை பண்பு —————  
(அ) மனந்திருந்த அனுபவம்  
(ஆ) கவனம்  
(இ) ஒப்புதல்  
(ஈ) நடுநிலை

————— is the first personality trait.

- (a) openness to experience  
(b) conscientiousness  
(c) agreeableness  
(d) neuroticism

2. SMART திறனாய்வு ————— யை குறிப்பிடுகின்றது.

- (அ) குறிக்கோள் நிர்ணயம்  
(ஆ) பின்னூட்டு  
(இ) பயிற்சி  
(ஈ) தனி வாழ்க்கை

————— is mentioned by SMART criteria.

- (a) Goal setting (b) Feed back  
(c) Training (d) Self life

3. சுய கண்காணிப்பு ————— ஆல்  
அறிமுகப்படுத்தப்பட்டது.

- (அ) மார்க்ஸ் (ஆ) மார்க் ஸ்னைய்டர்  
(இ) ஆஜ்சன் (ஈ) வில்ஸ்

Self monitoring was introduced by —————

- (a) Marx (b) Mark Snyder  
(c) Ajzen (d) Wills

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4. \_\_\_\_\_ என்பது சுய நம்பிக்கையின் தரம்  
 (அ) திறமை (ஆ) ஆற்றல்  
 (இ) ஆளுமை (ஈ) தன் முனைப்பு  
 \_\_\_\_\_ is the quality of self confident.  
 (a) Skill (b) Power  
 (c) Personality (d) Assertiveness
5. சமூக உறவுகளை \_\_\_\_\_ பலப்படுத்துகின்றது.  
 (அ) சுய விழிப்புணர்வு (ஆ) அணுகு முறை  
 (இ) பண்பு (ஈ) குழு கட்டமைப்பு  
 \_\_\_\_\_ is strengthened the social relations.  
 (a) Self awareness (b) Attitude  
 (c) Traits (d) Team building
6. உண்மை ஒரு \_\_\_\_\_ க்கு தேவையான முதல் தகுதி.  
 (அ) குற்றவாளி (ஆ) நோயாளி  
 (இ) தலைவர் (ஈ) குழந்தை  
 Honesty is the first quality of \_\_\_\_\_  
 (a) accuse (b) patient  
 (c) leader (d) child

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7. தகவல்களை பெறுவதற்கும் அளிப்பதற்கும் \_\_\_\_\_ பயன்படுகின்றது.  
 (அ) மின்சாரம் (ஆ) தொடர்பு  
 (இ) தொலைகாட்சி (ஈ) மின்சாதனங்கள்  
 \_\_\_\_\_ is used for receiving and giving information.  
 (a) Electricity (b) Communication  
 (c) Television (d) Electronic good
8. உணர்வு சார் நுண்ணறிவின் தந்தை யார்?  
 (அ) டேனியல் கோல்மேன்  
 (ஆ) சார்லஸ் பாப்பேஜ்  
 (இ) சுவாமிநாதன்  
 (ஈ) அப்துல்கலாம்  
 Who is the father of emotional intelligence?  
 (a) Daniel Goleman  
 (b) Charles Babbage  
 (c) Swaminathan  
 (d) Abdulkalam
9. சமூக புண்ணியங்கள் ஓர் \_\_\_\_\_  
 (அ) உரிமை (ஆ) கடமை  
 (இ) திறமை (ஈ) செயல்

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 [P.T.O]





Social grace is a \_\_\_\_\_

- (a) Right (b) Duty  
(c) Skill (d) Action

10. குழு முறையில் கலந்துரையாடல் \_\_\_\_\_  
புரிந்துகொள்ள முக்கிய பங்கு அளிக்கின்றது.

- (அ) தலைவரை (ஆ) அங்கத்தினரை  
(இ) தலைப்பை (ஈ) காலத்தை

Group discussion plays vital role in understanding \_\_\_\_\_

- (a) Leader (b) Member  
(c) Topic (d) Time

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (அ) சுய விழிப்புணர்வு பற்றி குறிப்பு வரைக.

Give account of self awareness.

Or

(ஆ) SWOT-விளக்குக.

SWOT - Explain.

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12. (அ) அணுகு முறையின் வகைகளைக் குறிப்பிடுக.

Mention the types of attitudes.

Or

(ஆ) தன் முனைப்பு என்றால் என்ன?

What is assertiveness?

13. (அ) பேச்சுவார்த்தை திறன் பற்றி நீவிர் அறிவன யாது?

What do you know about negotivation skills?

Or

(ஆ) மோதல் மேலாண்மை பற்றி குறிப்பு வரைக.

Write a note on conflict management.

14. (அ) உணர்வுசார் நுண்ணறிவு பற்றித் தொகுத்தெழுதுக.

Summarise the emotional intelligence.

Or

(ஆ) மன அழுத்த மேலாண்மையின் இன்றியமைபாமை எடுத்துரைக்க.

Narrate the significance of stress management.

15. (அ) உடுப்பு நெறியின் தன்மைகளை ஆராய்க.

Analyse the nature of dress code.

Or

(ஆ) குழு விவாதம் முறை பற்றி விளக்குக.

Explain the group discussion.

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PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (அ) ஆளுமை பண்புகள் பற்றி கட்டுரை எழுதுக.  
Write an essay on personality traits.

Or

- (ஆ) இலக்கு நிர்ணயத்தின் கொள்கைகளை வெளிக்கொணர்க.

Bring out the principles of goal setting.

17. (அ) சுய கண்காணிப்பு வரையறை செய்க.  
Define self monitoring.

Or

- (ஆ) கருத்து திறன் வெளிப்பாடு பற்றி ஆராய்க.  
Analyse the expression of perception.

18. (அ) குழு கட்டமைப்பு பற்றித் திறனாய்வு செய்க.  
Critically analyse the Team Building.

Or

- (ஆ) தலைமை பண்புகளுக்கான கோட்பாடுகளைத் தொகுத்தெழுதுக.

Enumerate the theories of leadership.

19. (அ) தொடர்பு திறனின் முக்கியத்துவம் பற்றி விவரி.  
Describe the importance of communication.

Or

- (ஆ) "ஜோகாரி விண்டோ" - விளக்குக.  
"Johari Window" - Explain.

20. (அ) சமூக புண்ணியங்களும் அதன் முக்கியத்துவமும் விளக்குக.

Elucidate the social grace and its importance.

Or

- (ஆ) மேஜை பண்புகள் பற்றி மதிப்பிடுக.  
Estimate the table manners.



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**Code No. : 30544 E    Sub. Code : JMCA 6 B/  
SECA 6 B**

B.C.A. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Computer Application – Main

Major Elective – III — SOFTWARE PROJECT  
MANAGEMENT

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Waterfall Life cycle model is otherwise called as \_\_\_\_\_.
  - (a) Linear Sequential Model
  - (b) Constructive Cost Model
  - (c) Hierarchical Model
  - (d) Visual Model

2. Software cost model can be abstracted in to a function of \_\_\_\_\_ basic parameters.
  - (a) Two
  - (b) Three
  - (c) Four
  - (d) Five
3. The Engineering set consist of \_\_\_\_\_.
  - (a) Design set
  - (b) Implementation set
  - (c) Deployment set
  - (d) All the above
4. Measurements can be categorized in two ways. What are those two ways?
  - (a) Direct and Indirect
  - (b) Front and Rear
  - (c) Metrics
  - (d) Quality and Reusability
5. Quality of the product comes under which type of measures?
  - (a) Indirect Measure
  - (b) Direct Measure
  - (c) Coading
  - (d) None of the above
6. In software maintenance removing errors spotted by users is known as \_\_\_\_\_.
  - (a) Adaptive
  - (b) Preventive
  - (c) Corrective
  - (d) Perfective

7. The best way to test the Software Project Management Plan (SPMP) is by
- (a) Prototyping
  - (b) Inspection
  - (c) Compilation
  - (d) Simulation
8. The best way to test the Software Project Management Plan (SPMP) is by
- (a) Reusability
  - (b) Reliability
  - (c) Scalability
  - (d) Usability
9. Software Management Principles includes \_\_\_\_\_.
- (a) Architecture-first Approach
  - (b) Life Cycle Process
  - (c) Both (a) and (b)
  - (d) None of these
10. Software errors can be categorized as \_\_\_\_\_ types.
- (a) One
  - (b) Two
  - (c) Three
  - (d) Four



PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write short notes on Improving Team Effectiveness.

Or

- (b) How Software Processes can be improved?

12. (a) Explain the Transition phase in software management process framework.

Or

- (b) Write short notes on Management Artifacts.

13. (a) Write short notes on work Break Down structure.

Or

- (b) Explain the Cost and Schedule Estimating Process.

14. (a) Write short notes on Management Indicator in Project Control.

Or

- (b) Write short notes on Quality Indicator in Project Control.

15. (a) Write about Early Risk Resolution.

Or

(b) Discuss about Teamwork among Stakeholders.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the Waterfall Model.

Or

(b) Explain the Process of Improving the Software Economics.

17. (a) Describe about Artifact sets in Artifacts of the Process.

Or

(b) Write in detail about Model-Based Software Architecture.

18. (a) Explain about Workflows of the Process.

Or

(b) Write in detail about Project Organizations and Responsibilities.

19. (a) Discuss about Project Environment in Process Automation.

Or

(b) Explain about the process Discriminants in tailoring the process.

20. (a) Discuss about Next Generation Software Economics.

Or

(b) Explain about Modern Process Transitions.

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Code No. : 22536 B Sub. Code : GEVS 11/  
JEVS 11/SEVS 11

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

First Semester

Part IV

ENVIRONMENTAL STUDIES

(For those who joined in July 2012 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. "Pollution" என்ற சொல் அறிமுகப்படுத்தப்பட்ட ஆண்டு
- (அ) 1966  
(ஆ) 1956  
(இ) 1946  
(ஈ) 1936

(ஆ) சுற்றுச்சூழல் விளைவுகளினால் ஏற்படும் நீர்  
மாகபாட்டினை வெளிக்கொணர்க.

Trace out the ecological effects of water  
pollution.

20. (அ) புவி வெப்பமடைதலைத் தவிர்ப்பதற்காக  
மேற்கொள்ளப்படும் பல்வேறு நடவடிக்கைகளை  
விளக்குக.

Describe the various measures to check  
global warming.

Or

(ஆ) அரசாங்கத்தினால் முறைப்படுத்தப்பட்ட குடும்பக்  
கட்டுபாட்டுத் திட்டங்களை ஆராய்க.

Analyse the family welfare programmes  
formulated by our Government.

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The word "pollution" was introduced in the year \_\_\_\_\_.

- (a) 1966 (b) 1956  
(c) 1946 (d) 1936

2. \_\_\_\_\_ ஆற்றல் சூரியனில் இருந்து பூமிக்கு நேரடியாக இடைவிடாமல் வந்து கொண்டு இருக்கின்றது.

- (அ) காற்று (ஆ) சூரிய  
(இ) பெருங்கடல் (ஈ) உயிரிய வாயு

\_\_\_\_\_ energy is constantly arriving on the earth from the sun.

- (a) wind (b) solar  
(c) ocean (d) biogas

3. சூழ்நிலைக் கோபுரங்கள் \_\_\_\_\_ வகையாகப் பிரிக்கப்படுகின்றன.

- (அ) 1 (ஆ) 2  
(இ) 3 (ஈ) 4

Ecological pyramids has been classified into \_\_\_\_\_ types.

- (a) 1 (b) 2  
(c) 3 (d) 4

4. தாவரங்கள் சூரிய ஒளியின் உதவியால் உற்பத்தி செய்த உணவு ஆற்றலைத் தங்களிடமிருந்து தாவர உண்ணிகளின் சிதைப்பவர்களுக்கு கொடுக்கும் அமைப்பே \_\_\_\_\_.

- (அ) உணவு அலைகள்  
(ஆ) சூழ்நிலைக் கோபுரங்கள்  
(இ) சூழ்நிலை மண்டலம்  
(ஈ) உணவுச் சங்கிலிகள்

\_\_\_\_\_ is a linear sequence of organisms which starts from producer organisms and ends with decomposer species.

- (a) Food web  
(b) Ecological Pyramids  
(c) Eco system  
(d) Food chains

5. சாதாரணமாகக் கேட்கக் கூடிய ஒலி \_\_\_\_\_.

- (அ) 10 dB (ஆ) 12 dB  
(இ) 120 dB (ஈ) 40 dB

Normally we can hear \_\_\_\_\_ sound.

- (a) 10 dB (b) 12 dB  
(c) 120 dB (d) 40 dB



6. திடக் கழிவுகளை ஒழுங்குபடுத்துவதற்குக் \_\_\_\_\_  
ஒரு பழக்கமாக இருந்து வருகிறது.

(அ) நிலத்தில் கழிவுகளை அகற்றுதல்

(ஆ) தொழு உரமாக்கல்

(இ) எரித்துச் சாம்பலாக்குதல்

(ஈ) மறுசுழற்சி

\_\_\_\_\_ is an aerobic Microbial process which  
degrades organic matter.

(a) Disposal from land fills

(b) Compositing

(c) Incineration

(d) Recycling

7. காற்று மாசுபாடு தடுப்புச் சட்டம் கொண்டு வரப்பட்ட  
ஆண்டு \_\_\_\_\_.

(அ) 1961

(ஆ) 1971

(இ) 1981

(ஈ) 1991

Air prevention and control of Pollution act was  
passed in the year \_\_\_\_\_.

(a) 1961

(b) 1971

(c) 1981

(d) 1991

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8. 1972 ஆம் ஆண்டுக் கொண்டு வரப்பட்ட சட்டம் எது?

(அ) காற்று மாசுபாடு தடுப்புச் சட்டம்

(ஆ) தண்ணீர் மாசுபாடு தடுப்புச் சட்டம்

(இ) சுற்றுச்சூழல் பாதுகாப்புச் சட்டம்

(ஈ) வன உயிரினப் பாதுகாப்புச் சட்டம்

In the year 1972, which act was passed?

(a) Air prevention and control of pollution act

(b) Water prevention and control of pollution act

(c) Environmental Protection act

(d) Wildlife Protection act

9. எரித்துச் சாம்பலாக்குதல் என்பது, எதை வெளியேற்றும்  
முறையாகும் \_\_\_\_\_.

(அ) மணல் மேலாண்மை

(ஆ) காற்று மேலாண்மை

(இ) நீர் மேலாண்மை

(ஈ) திடக்கழிவு மேலாண்மை

Incineration is a disposal method in \_\_\_\_\_.

(a) soil management

(b) air management

(c) water management

(d) solid waste management

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10. இந்திரா காந்தி தேசிய பூங்கா அமைந்துள்ள இடம்

- (அ) நீலகிரி மலை  
(ஆ) திருநெல்வேலி மலை  
(இ) ஏலக்காய் மலை  
(ஈ) ஆனை மலை

Indira Gandhi National Park is located in the

- (a) Nilgiri hills  
(b) Tirunelveli hills  
(c) Cardamom hills  
(d) Anaimalai hills

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 250 words.

11. (அ) உலக அளவில் உணவு பிரச்சினைகள் என்ன?

What are the problems of global food problems?

Or

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(ஆ) புதுப்பிக்கக்கூடிய ஆற்றல் மற்றும் புதுப்பிக்கவியலாத ஆற்றல் வளங்கள் சிறு குறிப்புத் தருக.

Define renewable and non-renewable energy resources.

12. (அ) சூழ்நிலை மண்டலம் என்றால் என்ன? அவற்றின் செயல்பாடு யாது?

What is ecosystem? What are its function?

Or

(ஆ) உயிரியக் கூறுகள் மற்றும் உயிரற்ற கூறுகள் சிறு குறிப்புத் தருக.

Write a short note on Biotic and Abiotic components.

13. (அ) இந்திய நிலத்தின் வகைகளை வரிசைப்படுத்துக.

List out the types of land in India.

Or

(ஆ) மரபியப் பல்வகைமை மற்றும் சிற்றினப் பல்வகைமை என்றால் என்ன?

What is Genetic diversity and species diversity?

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14. (அ) அலை மாசுபாடு என்றால் என்ன? அவற்றின் மூலங்கள் யாவை?

What is thermal pollution? What are its sources?

Or

- (ஆ) நகர்ப்பகுதிகளில் உருவாகும் இரைச்சல்கள் யாவை?

How noise pollution created in cities?

15. (அ) சுற்றுச்சூழல் பாதுகாப்புச் சட்டம் வரையறு.

Define Environment Protection Act.

Or

- (ஆ) மனித உரிமைகளின் தேவை என்ன?

What is the need for Human rights?

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 600 words.

16. (அ) 'நீர் பாதுகாப்பு என்பது அன்றைய தேவை' விவாதிக்க.

'Water conservation is need of the day' – Discuss.

Or

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- (ஆ) காடு அழிக்கப்படுவதால் ஏற்படும் பாதிப்புகளை ஆய்வு செய்க.

Enumerate the effects of deforestation.

17. (அ) "இந்தியா ஓர் உயிரிய மிகைப் பல்வகைமை மண்டலம்" – விவரி.

"India is a mega-diversity nation" – Explain.

Or

- (ஆ) உயிரியப் பல்வகைமையின் பாதுகாப்புத் தேவை மற்றும் அணுகுமுறைகளை விவரிக்க.

Explain the need and approaches for the conservation of diversity.

18. (அ) சூழியல் வழிமுறை வளர்ச்சிப் பற்றிக் கட்டுரை எழுதுக.

Write an essay on Ecological succession.

Or

- (ஆ) 'சூழ்நிலைக் கோபுரம்' – விளக்குக.

Describe 'Ecological Pyramid'.

19. (அ) நில மாசுபாட்டினால் ஏற்படும் பாதிப்புகளை மதிப்பிடுக.

Evaluate the impacts of land pollution.

Or

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B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

First Semester

Computer Application – Core

PROGRAMMING IN C

(For those who joined in July 2017 onwards)

Time : 3 hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. Which is valid C expression?  
(a) int my\_num = 1,00,000;  
(b) int my\_num = 100000;  
(c) int num = 1000;  
(d) int \$num = 10000;
2. Which of the following is not a valid variable name declaration?  
(a) float PI = 3.14;      (b) double PI = 3.14;  
(c) int PI = 3.14;      (d) # define PI = 3.14;
3. The operator “-” is known as \_\_\_\_\_ operator.  
(a) decrement      (b) increment  
(c) increment 1      (d) decrement 1
4. The operator “++” is known as \_\_\_\_\_ operator.  
(a) decrement      (b) increment  
(c) increment 1      (d) decrement 1
5. How to read a single character from the terminal, using the function is \_\_\_\_\_.  
(a) getchar      (b) putchar  
(c) char      (d) int
6. The \_\_\_\_\_ function joins two strings together.  
(a) strcmp      (b) strcpy  
(c) strcat      (d) strlen

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7. \_\_\_\_\_function can be used to read a single character.

- (a) getch ( )                      (b) return  
(c) putch ( )                      (d) getch

8. Printf and scanf belongs to the category of functions.

- (a) library                      (b) functions  
(c) user defined                      (d) multi

9. What type of initialization is needed for the segment "ptr[3] = '3';" to work?

- (a) char \*ptr = "Hello!";  
(b) char ptr[] = "Hello!";  
(c) both char \*ptr = "Hello!"; and  
char ptr[] = "Hello!";  
(d) none of the mentioned

10. Which is an indirection operator among the following?

- (a) &                      (b) \*  
(c) ->                      (d) .

Page 3 Code No. : 40656 E

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write about keywords and Identifiers.

Or

(b) Explain the basic structure of C program.

12. (a) Write short notes on the if else statement with example.

Or

(b) Explain do...while statement with example.

13. (a) Write a notes on fundamental types of arrays.

Or

(b) What is strcmp? Explain it.

14. (a) Write a simple program to no arguments but return a value.

Or

(b) Write short notes on category of functions.

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[P.T.O.]





15. (a) What is pointer Explain with pointer expression.

Or

- (b) Write short notes on declaring pointer variables.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What do you mean by data types? How many data types does C language consist?

Or

- (b) Write a program to perform basic arithmetic operation using arithmetic operators.

17. (a) Write a program to print sum of digits of a number using modulus operator.

Or

- (b) What are loop control structures? Explain for loop, while loop and do-while loop with their syntax.

Page 5 Code No. : 40656 E

18. (a) Define 2-D array with its syntax and explain how to initialize 2-D array

Or

- (b) What are string handling functions? Explain all with their uses.

19. (a) Define categories of functions and explain any one of them

Or

- (b) Explain a multi function program with a flowchart and one simple program.

20. (a) Explain pointer and character string with suitable example.

Or

- (b) Write a program to print of a address of a variable along with its value.

Page 6 Code No. : 40656 E





## SECOND SEMESTER

## COMPUTER APPLICATION - CORE

## OBJECT ORIENTED PROGRAMMING WITH C++

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

Part - A (10 X 1 = 10 marks)

Answer all questions, choose the correct answer

1. 1. \_\_\_\_\_ is a basic data type.  
a) Float      b) class      c) Pointer      d) None of these
2. \_\_\_\_\_ type conversion is done using typecast operator  
a) Explicit      b) implicit      c) both a and b.      D) either s or b
3. The loop statement terminated by a semi colon is \_\_\_\_\_  
a) while      B) do while      c) for loop      d) continue
4. Function overloading is the concept of \_\_\_\_\_  
a) Friend function      b) Inline function      c) Member function      d) Polymorphism
5. The use of parenthesis is optional for \_\_\_\_\_  
a) goto      b) break      c) return      d) break all
6. The Destructor is executed when \_\_\_\_\_  
a) Object goes out of scope.      b) Classes is created      c) At end of main function      d) none of these
7. The inheriting class is called as \_\_\_\_\_ derived class  
a) First      b) Derived class      c) Base class      d) Either a or c
8. Pointer holds address of the variable  
a) Variable      b) object      c) pointers      d) class
9. The \_\_\_\_\_ operator is used to allocate memory  
a) Static      b) delete      c) new      d) kill
10. The Compile time polymorphism can be achieved by \_\_\_\_\_  
a) Overriding      b) Function Overloading      c) Virtual function      d) Virtual class

**Answer all the questions, choosing either (a) or (b)****Each answer should not exceed 250 words**

11. (a) Write about scope resolution operator in OOPS. (or)  
(b) Explain the applications of C++.
12. (a) Write short notes on function overloading. (or)



- (b) Explain c++ program with class.
13. (a) Explain copy constructors with example. (or)  
(b) What is operator overloading? Explain it
14. (a) Write a program to nesting of class. (or)  
(b) Write short notes on multi level inheritance.
15. (a) What is c++ stream class. Explain. (or)  
(b). Write short notes on Error handling during file operations.

**Part -C**

**5 \* 8 = 40**

**Answer all the questions, choosing either (a) or (b)  
Each answer should not exceed 600 words**

16. (a) Explain the object oriented programming paradigm with suitable example. (or)  
(b) Write a program to perform basic arithmetic operation using arithmetic operators.
17. (a) Explain about call by reference and return by reference in detail with an example. (or)  
(b) What is function overloading?. Explain with an example.
18. (a) Explain the constructing two dimensional array with example (or)  
(b) Write a program to overload unary operator using friend function.
19. (a) Write a program to nesting of classes. (or)  
(b) Explain the types of inheritances with suitable examples.
20. (a) Explain managing console I/O operations. (or)  
(b) Write a program for file pointer using their manipulators in C++.



(6 pages)

Reg. No. : .....

Code No. : 40658 E      Sub. Code : SMCA 31

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Computer Application – Main

JAVA PROGRAMMING

(For those who joined in July 2017 onwards)

Time : Three hours      Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which component is used to compile, debug and execute java program?  
(a) JUM                      (b) JDK  
(c) JIT                      (d) JRE
2. What is the extension of java code files?  
(a) .class                      (b) .java  
(c) .txt                      (d) .js

3. Which method can be defined only once in a program?  
(a) main method              (b) static method  
(c) private method              (d) public method
4. Method overloading is one of the ways that java implements  
(a) polymorphism  
(b) interface  
(c) inheritance  
(d) encapsulation
5. All standard classes of java are included within a package called  
(a) java.awt                      (b) java.io  
(c) java.swing                      (d) java.applet
6. A thread can have a maximum priority of  
(a) 5                      (b) 10  
(c) 15                      (d) 20

Page 2      Code No. : 40658 E



7. Passing values to the parameters is done in the \_\_\_\_\_ file of an applet
- (a) .java                      (b) .class  
(c) .html                      (d) .txt
8. The \_\_\_\_\_ method is used to draw strings on the applet
- (a) drawText()              (b) drawArc()  
(c) drawchar()              (d) drawstring()
9. The default layout of the panel is
- (a) FlowLayout  
(b) BorderLayout  
(c) GridLayout  
(d) Insets
10. The components are used to set input from the user
- (a) TextField  
(b) Text  
(c) String  
(d) Label

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Discuss about Java Buzzwords.  
Or  
(b) Write down the elemental types of data.
12. (a) Explain about the keyword 'static'.  
Or  
(b) Discuss about Recursion.
13. (a) Explain about interface.  
Or  
(b) Write a note on interthread communication.
14. (a) Discuss about applet initialization and termination.  
Or  
(b) List down the methods of the MouseListener interface.

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[P.T.O.]





15. (a) Give an overview about different types of controls supports AWT.

Or

- (b) Write a note on FlowLayout.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about arrays.

Or

- (b) Briefly explain about operators in java.

17. (a) Discuss in detail about method overriding.

Or

- (b) Give an overview about nested and inner classes.

18. (a) How exception handling is done in java? Explain.

Or

- (b) Write down the steps to create a Thread. Write a java program to illustrate Thread.

Page 5 Code No. : 40658 E

19. (a) Write a java applet program to scrolls a message from right to left across the applet's window.

Or

- (b) Explain about the Mouse Event class.

20. (a) Briefly explain about window fundamentals.

Or

- (b) Discuss about the drawing methods available in Graphics class.
- 

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Reg. No. : .....

Code No. : 40659 E Sub. Code : SMCA 32

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Computer Applications – Main

FINANCIAL ACCOUNTING

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The principles of Accountancy which recognizes the double aspect of a business transaction is known as \_\_\_\_\_ concept.
  - (a) entity concept
  - (b) dual aspect concept
  - (c) accrual concept
  - (d) objectivity concept

20. (a) Explain the features of Income and Expenditure account.

Or

- (b) There is a Tournament fund showing a credit balance of Rs.5,000 on 1.1.2018 in a sports club. During 2018 income to the fund amount to Rs.1,000 and tournament expenses Rs.800; Tournament fund investments on 1.1.2018 was Rs.5,000.

How will they appear in the final account of the club for the year ended 31.12.2018?

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2. The rule for Real account is
- (a) debit what comes in and credit what goes out
  - (b) debit the receiver and credit the giver goes out
  - (c) debit all expenses and losses and credit all gains and incomes
  - (d) none of the above
3. Sale of old machinery on account is recorded in
- (a) sales book                      (b) cash book
  - (c) journal                              (d) ledger
4. Ledger is a principal book in which
- (a) all accounts are kept
  - (b) only personal accounts are kept
  - (c) only real accounts are kept
  - (d) only sales accounts are kept
5. \_\_\_\_\_ forms a connecting link between the ledger accounts and the final accounts.
- (a) Trial balance
  - (b) Balance Sheet
  - (c) Profit and loss a/c
  - (d) Trading account

6. The main object of preparing Trial balance is
- (a) to know the financial position of the concern
  - (b) to check the arithmetical accuracy of accounts
  - (c) to know the gross profit of the concern
  - (d) to know the net profit of the concern
7. Summary of assets and liabilities
- (a) Balance Sheet
  - (b) Trading account
  - (c) Profit and loss a/c
  - (d) Income and Expenditure a/c
8. Excess of sales over cost of goods sold
- (a) net profit                      (b) net loss
  - (c) gross profit                      (d) gross loss
9. Income and Expenditure account relates to
- (a) real a/c
  - (b) nominal a/c
  - (c) personal a/c
  - (d) impersonal a/c





10. Any expenditure incurred in acquiring fixed assets for the business is called as \_\_\_\_\_ expenditure.
- (a) revenue expenditure
  - (b) capital expenditure
  - (c) referred revenue expenditure
  - (d) none of these

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define accounting. Mention the objectives of accounting.

Or

- (b) How the accounts are classified under double entry system?

12. (a) Distinguish between Journal and Ledger.

Or

- (b) Give journal entries for the following transactions.

- (i) Paid salary to Kannan Rs.3,000
- (ii) Received commission Rs.500
- (iii) Paid to Kannan Rs.1,500
- (iv) Purchase a building for cash Rs.3,00,000
- (v) Sold Machinery to Kumar Rs.10,000 on credit.

Page 4 Code No. : 40659 E

13. (a) What is Trial balance? Bring out the objectives of preparing the Trial balance.

Or

- (b) What are the different types of errors which are disclosed by Trial balance?

14. (a) From the following details, calculate gross profit.

Opening stock Rs.2,000

Purchases Rs.15,000

Sales Rs.26,000

Closing stock Rs.3,000

Return outwards Rs.200

Return inwards Rs.700

Wages Rs.1,000

Salaries Rs.2,000

Interest Rs.500

Or

- (b) What are current assets? Give an examples.

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15. (a) Distinguish between Capital expenditure and Revenue expenditure.

Or

- (b) What amount will be shown in the Income and Expenditure?

Stock of sports goods as on 1.1.2018 Rs.1,000

Stock of sports goods as on 31.12.2018 Rs.400

Sports goods purchased during 2018 Rs.3,600

Old goods sold during 2018 Rs.80.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What do you mean by double entry system of Book-keeping? What are its advantages?

Or

- (b) Explain the different accounting conventions.

Page 6 Code No. : 40659 E

17. (a) Enter the following transactions in proper subsidiary books

2018

December 1 Bought goods from Balan Rs.4,000

2 Sold goods to Mohan Rs.2,000

7 Sundar sold goods to us Rs.2,000

8 David bought goods from us  
Rs.1,400

10 Received goods returned by Mohan  
Rs.160

12 We returned goods to Balan Rs.100

18 Sold goods to Patel Rs.1,000

22 Purchased goods from Sankar  
Rs.1,200

26 Returned goods to Sundar Rs.200

30 Sold goods to Mani Rs.1,100.

Or

- (b) What is Ledger? How to prepare an Ledger accounts from the Journal?

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18. (a) From the following balances of accounts prepare Trial balance

	Rs.
Capital	40,000
Building	6,000
Bank a/c	4,000
Interest a/c	350
Bills Receivable a/c	8,000
Debtors	30,000
Bills payable	15,900
Furniture a/c	6,500
Discount received a/c	1,200
Discount allowed a/c	2,100
Machinery a/c	8,000
Creditors	7,850

Or

- (b) Explain the different types of errors which are not disclosed by Trial balance.

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19. (a) Prepare Profit and loss a/c for the year ending 31.3.2018

	Rs.
Gross profit	25,000
Salaries	5,600
Insurance	200
Discount allowed	400
Discount received	300
Commission earned	100
Advertisement	450
Taxes	150
Travelling expenses	500
Stationery	75
Rent	650
Interest on loan	225
Repairs	125
Office expenses	55
General expenses	875
Postings	175
Printing charges	375

Or

- (b) Distinguish between Trial balance and Balance Sheet.

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Reg. No. : .....

Code No. : 40660 E Sub. Code : SMCA 33

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Computer Application — Main

INTRODUCTION TO INTERNET WITH HTML

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. SMTP stands for \_\_\_\_\_  
(a) Simple Mail Transmit Protocol  
(b) Smart Mail Transfer Protocol  
(c) Smart Mailbox Transfer Protocol  
(d) Simple Mail Transfer Protocol

2. Internet is \_\_\_\_\_  
(a) Dynamic system  
(b) Complex system  
(c) Decentralized system  
(d) All of the above
3. All HTML tags are enclosed in \_\_\_\_\_  
(a) # and #                      (b) ? and !  
(c) < and >                      (d) { and }
4. Link URL in HTML is specified using \_\_\_\_\_ attribute.  
(a) src                              (b) href  
(c) link                              (d) rel
5. \_\_\_\_\_ denoting the largest size heading.  
(a) <h1>                              (b) <h2>  
(c) <h3>                              (d) <h4>
6. An \_\_\_\_\_ list is represented by <UL> and </UL> tag.  
(a) Ordered                              (b) Definition  
(c) Unordered                              (d) Both (a) and (b)

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7. In the \_\_\_\_\_ type of style is defined with in the body of the HTML document itself.

- (a) In-line
- (b) Internal
- (c) External
- (d) Both (b) and (c)

8. CSS stands for \_\_\_\_\_

- (a) Content Scrambling System
- (b) Cascading Style Sheet
- (c) Custom Style Sheet
- (d) Colorful Style Symbols

9. The <frameset> tag has \_\_\_\_\_ attributes.

- (a) 3
- (b) 2
- (c) 1
- (d) 4

10. \_\_\_\_\_ button are used to select only one from a list of option available.

- (a) check box
- (b) radio
- (c) submit
- (d) reset

Page 3 Code No. : 40660 E

**PART B — (5 × 5 = 25 marks)**

Answer ALL questions by choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Discuss about computers in business.

Or

(b) Explain about internet explorer.

12. (a) Briefly explain about history of HTML.

Or

(b) Write short notes on comment lines.

13. (a) How to insert Horizontal rule in HTML document and explain its attributes?

Or

(b) Explain about unordered list with example.

14. (a) Discuss about internal style sheet.

Or

(b) What are multiple styles? Illustrate with suitable examples.

Page 4 Code No. : 40660 E

[P.T.O]



15. (a) Discuss about frameset definition.

Or

(b) Write short notes on :

(i) Text area. (2)

(ii) Password. (1)

(iii) Radio button. (2)

PART C — (5 × 8 = 40 marks)

Answer ALL questions by choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about World Wide Web.

Or

(b) Discuss about internet technologies.

17. (a) Describe about HTML documents.

Or

(b) Discuss about links in HTML.

18. (a) Explain about Heading and aligning the headings.

Or

(b) Explain about how to insert image and pictures in HTML document.

Page 5 Code No. : 40660 E

19. (a) Explain about elements of styles.

Or

(b) Explain how to link a style sheet to an HTML document.

20. (a) Discuss about frame definition.

Or

(b) Explain about elements of forms.

Page 6 Code No. : 40660 E



(6 pages)

**Reg. No. :** .....

**Code No. : SS 30529 E Sub. Code : JMCA 41/  
SMCA 41**

B.C.A. (CBCS) DEGREE (Special Supplementary)  
EXAMINATION, APRIL 2020.

Fourth Semester

Computer Application – Main

VISUAL BASIC

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Visual Basic is a tool that allows you to develop application in \_\_\_\_\_
  - (a) Real Time
  - (b) Graphical User Interface
  - (c) Character User Interface
  - (d) None of these



2. What extension is used to represent project file in Visual Basic?
- (a) .frm                      (b) .vbp  
(c) .cls                      (d) .vb
3. MDI stands for \_\_\_\_\_
- (a) Multiple Document Interface  
(b) Multiple Design Interface  
(c) Manipulated Document Interface  
(d) Menu Design Interface
4. Which control in Visual Basic is used to create applications that present information in rows and columns?
- (a) MSGridline              (b) MSLineGrid  
(c) MSGridFlex              (d) MSFlexGrid
5. Each database system supporting ODBC provides a/an \_\_\_\_\_
- (a) Interface                  (b) Modules  
(c) Library                    (d) Virtual Memory
6. Which ActiveX Control that is used to access an ODBC data source?
- (a) Remote Data Control  
(b) Data Access Object  
(c) Data Control  
(d) None

7. Which property in Data report is used to point an object and to return an ADO record set?
- (a) Data
  - (b) DataSource
  - (c) Report
  - (d) None
8. What is the name of menu in VB which is used to add Data Report?
- (a) File
  - (b) Edit
  - (c) Form
  - (d) Project
9. What is a component program object that can be re-used by many application programs within a computer?
- (a) Com
  - (b) ActiveX control
  - (c) ActiveX Exe
  - (d) Tool Box
10. How many native toolbox controls for working with the file system in VB?
- (a) Two
  - (b) Four
  - (c) One
  - (d) Three

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Give a neat sketch for working with forms in VB.

Or

- (b) Write short note on Array in Visual Basic.

12. (a) List out the Mouse Events in VB and Explain any one.

Or

- (b) How the Graphics is used for Applications in VB?

13. (a) What are all the evolutions of computer Architecture?

Or

- (b) Discuss shortly on Remote Data Objects in ODBC.

14. (a) What is Data Environment? How it works as Report creation in VB?

Or

- (b) Explain about OLE Drag and Drop and give examples.



15. (a) What is Active Data Objects? How it works in ActiveX controls in VB?

Or

- (b) Give an overview of Files and File system controls.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)  
Each answer should not exceed 600 words.

16. (a) Give a neat sketch on Visual Basic 6.0 programming Environment and Explain it.

Or

- (b) How to create controls and working with control Arrays?

17. (a) Elaborate on Menus and Dialog Boxes in VB.

Or

- (b) Explain about Multiple Document Interface (MDI) in VB.

18. (a) Discuss about ODBC and Data Access Objects.

Or

- (b) Explain the working structure of ODBC using Remote Data Objects.

19. (a) What is Data Environment Designer? Explain in detail.

Or

(b) Describe Object Linking and Embedding.

20. (a) Give an overview of ADO and OLEDB.

Or

(b) How the interface with windows are used in VB? Give some examples.

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## FOURTH SEMESTER

## COMPUTER APPLICATION - CORE

## E - COMMERCE

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

Part - A (10 X 1 = 10 marks)

Answer all questions, choose the correct answer

1. \_\_\_\_\_ is the key to increasing and sustaining profitability.
  - a. Customer Relationship Management
  - b. Maintenance Repair Operations
  - c. Continuous Performance Management
  - d. Supply Chain Management
2. In the US which act enables to deter piracy?
  - a. No electronic theft
  - b. Cyber theft
  - c. Internet time theft
  - d. None
3. Which CRM process involves " Front Office" Customer touch points?
  - a. Analytical CRM
  - b. Personalization
  - c. Customer Interaction
  - d. Operational CRM
4. Which vendor enables buyers and sellers to trade and create business opportunities for all trading partners?
  - a. Ariba
  - b. Commerce One
  - c. i2 technologies
  - d. Oracle
5. Which implements a simple data manager model for a shopping kart application?
  - a. The Pages
  - b. Receipt Bean
  - c. Basket Bean
  - d. jsp
6. \_\_\_\_\_ platform provides full voice and data support with worldwide roaming capabilities.
  - a. CDMA
  - b. GSM
  - c. TDMA
  - d. Bluetooth
7. \_\_\_\_\_ refers to the specific applications delivered or accessed over the internet.
  - a. Web Deployable
  - b. Web Addressable
  - c. JAVA Remote Method
  - d. HR applications
8. \_\_\_\_\_ interface allows users to access multiple database types transparently.
  - a. DBI
  - b. ODBC
  - c. JDBC
  - d. OLE DB
9. \_\_\_\_\_ specialize in mobile phones with PDA capabilities using the palm OS
  - a. Kyocera
  - b. Compaq
  - c. palm
  - d. symbol
10. The Lotus-AQL test used a variation of simple implementation protocol known as
  - a. SIP
  - b. SPI
  - c. SCM
  - d. CRM

**PART B (5 X 5 = 25 MARKS)**

Answer ALL questions, Choosing either (a) or (b)

11. a) Explain various issues in implementing Ecommerce  
Or  
b) What is online trust? Explain.
12. a) Explain briefly about any five Ecommerce software Vendors.  
Or  
b) Write about Internet selling Environment
13. a) Explain the different stages for developing a commerce site.  
Or  
b) Explain the different concerns for the mobile enterprise
14. a) Explain the benefits of Web addressability  
Or  
b) Explain XML and Ecommerce
15. a) Write about SIP and SIMPLE  
Or  
b) Write the ten worst security mistakes for IT Professional



**Continuation Sheet**

**PART C (5 X8= 40 MARKS)**

Answer ALL questions, Choosing either (a) or (b)

16. a) What are the benefits of the Ecommerce Market?  
Or  
b) Explain WCBE Commerce integrator architecture in detail
17. a) Explain how to establish your online identity with right web address in ecommerce Business  
Or  
b) Write a brief note on Internet Payment processing system
18. a) Explain the Shopping Cart Scenario in detail  
Or  
b) Write a brief note on wireless WAN
19. a) Explain various development categories of business value  
Or  
b) Explain about online Merchandising strategies
20. a) Explain the requirements for E-BI application development solution  
Or  
b) Write down the seven top errors that lead to computer security vulnerability in corporate management



Time : Three hours

Maximum: 75 marks

Part - A (10 X 1 = 10 marks)

Answer all questions, choose the correct answer

- The solution which increases or decreases the value of the objective function indefinitely is called \_\_\_\_  
a) bounded      b) infeasible      c) unbounded      d) degenerate
- The number of basic variables in a linear system of m equations with n unknowns is \_\_\_\_  
a) m      b) n      c) n-m      d) n+m
- Which of the following is the optimal assignment algorithm?  
a) Simplex      b) graphical      c) Hungarian      d) big-M
- If the number of tasks is not equal to the number of persons, then the AP is called \_\_\_\_  
a) maximisation      b) unbalanced      c) balanced      d) prohibited
- Which of the following algorithm is used to find the minimum spanning tree?  
a) Prim's      b) Dijkstra's      c) Gauss      d) Stepping stone
- The dual of the maximum flow problem is called \_\_\_\_  
a) minimum cut      b) transportation      c) assignment      d) minimum flow
- If two or more parallel activities have the same head and tail events, we must introduce \_\_\_\_  
a) predecessor activity      b) dummy activity      c) successor activity      d) arrow
- Expected duration of an activity is calculated by using the formula \_\_\_\_  
a)  $\frac{t_o + t_p}{6}$       b)  $\frac{t_o + 4t_m + t_p}{6}$       c)  $\frac{t_m + 4t_o + t_p}{6}$       d)  $\frac{t_m + 4t_p + t_o}{6}$
- The value of the fair game is \_\_\_\_  
a) -1      b) 1      c) 0      d)  $\frac{1}{2}$
- The time interval between placing of an order and its actual arrival is called \_\_\_\_  
a) demand      b) lead time      c) order cycle      d) holding charge

**PART-B***Answer ALL questions choosing either (a) or (b)*

- 11(a) Write the advantages and disadvantages of the linear programming problem.

**OR**

- (b) The manager of an oil refinery must decide an optimum mix of two possible blending processes of which the input and output production runs are as follows:

Process	Input		Output	
	Crude A	Crude B	Fuel x	Fuel y
1	6	4	6	9
2	5	6	5	5

The maximum amount of crude A and crude B are 250 units and 200 units respectively. Market demand shows that at least 150 units of fuel x and 130 units of fuel y must be produced. The profit per production run from process 1 and process 2 are 4 and 5 respectively. Formulate the problem for maximising the profit.

- 12(a) Write all the steps for solving an assignment problem.



(b) There are 5 jobs and 5 machines and the associated cost matrix for the assignment is as follows. Find the optimal assignment

Machines

Jobs	6	12	3	11	15
	4	2	7	1	10
	8	11	10	7	11
	16	19	12	23	21
	9	5	7	6	10

13 (a) Write down the priority sequencing rules.

**OR**

(b) In a factory there are six jobs to perform, each of which should be processed through two machines A and B on the order A-B. The processing times are given below. Determine the sequence for performing the jobs that would minimise the total elapsed time.

Jobs	1	2	3	4	5	6
A	1	3	8	5	6	3
B	5	6	3	2	2	10

14 (a) List all the rules for the network construction and labelling the events.

**OR**

(b) Mention all the steps in the PERT planning process.

15 (a) Explain the maximin principle and the minimax principle.

**OR**

(b) A manufacturing company purchases 9000 parts of a machine for its annual requirements, ordering one month usage at a time. Each part cost ₹20. The order cost per ordering is ₹15 and the carrying charges are 15% of the average inventory per year. You have been asked to suggest a more economical purchasing policy for the company. What advice would you offer and how much it save the company per year.

16 (a) Write down the simplex algorithm. Answer All PART-C (5x8 = 40 marks) questions choosing either (a) or (b)

**OR**

(b) Solve the following LPP:

$$\text{Maximise } z = 3x_1 + 2x_2$$

$$x_1 + x_2 \leq 4$$

$$\text{Subject to } x_1 - x_2 \leq 2$$

$$x_1, x_2 \geq 0$$



17 (a) Using the following cost matrix, find the optimal job assignment and the cost of assignment.

		Jobs				
		1	2	3	4	5
Persons	A	10	3	3	2	8
	B	9	7	8	2	7
	C	7	5	6	2	4
	D	3	5	8	2	4
	E	9	10	9	6	10

OR

(b) A company has four plants A, B, C and D each of which can manufacture four products. Production cost differ from plant to plant as does sales revenue. From the following data, obtain which product each plant should to produce to maximise the profit?

Sales Revenue matrix (in ₹1000)

		1	2	3	4
		A	50	68	49
B	60	70	51	74	
C	55	67	53	69	
D	58	65	54	69	

Production matrix (in ₹1000)

		1	2	3	4
		A	49	60	45
B	55	63	45	69	
C	52	62	49	68	
D	55	64	48	66	

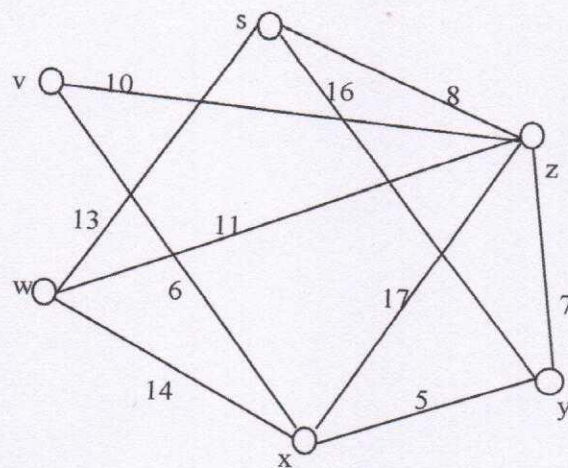
18 (a) Find the sequence that minimises the total elapsed time for performing the following jobs on three machines A, B and C in the order A-B-C. Processing times are in the following table.

Jobs	1	2	3	4	5
A	8	10	6	7	11
B	5	6	2	3	4
C	4	9	8	6	5

OR



(b) Use Dijkstra's algorithm to find the shortest path from 's' to any other vertex in the graph given below



19 (a) Explain the project management life cycle.

**OR**

(b) A project has the following time schedule:

Activity	1-2	1-3	2-4	3-4	3-5	4-9	5-6	5-7	6-8	7-8	8-9	8-10	9-10
Duration (weeks)	4	1	1	1	6	5	4	8	1	2	1	8	7

Construct PERT network and find

- (i)  $T_E$  and  $T_L$  for each event.
- (ii) Critical path and its duration.

20(a) Solve the following game graphically

Player-A	Player-B	
	B <sub>1</sub>	B <sub>2</sub>
A <sub>1</sub>	-6	7
A <sub>2</sub>	4	-5
A <sub>3</sub>	-1	-2
A <sub>4</sub>	-2	5
A <sub>4</sub>	7	-6

**OR**

(b) A particular item has a demand of 9000 units/year. The cost of one procurement is ₹.100 and the holding cost per unit is ₹2.40 per year. The replacement is instantaneous and no shortages are allowed. Determine (a) economic lot size (b) the number of orders per year (c) the time between orders and (d) the total cost per year in the cost of one unit is ₹1.



(6 pages)

Reg. No. : .....

Code No. : 40530 E    Sub. Code : JMCA 51/  
SMCA 51

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Fifth Semester

Computer Application – Main

SOFTWARE ENGINEERING

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. \_\_\_\_\_ software, on the other hand, is designed to be sold on the open market, to perform functions that many people need, and to run on general purpose computers
- (a) Embedded                      (b) Utility  
(c) System                         (d) Geberic

2. Expand COTS.
- (a) Commercial Off-The-Shelf software  
(b) Common Off-The-Shelf software  
(c) Calculate Off-The-Shelf software  
(d) Continuous Off-The-Shelf software
3. \_\_\_\_\_ requirements describe what the system should do; in other words, they describe the services provided for the users and for other systems
- (a) Quality                      (b) Functional  
(c) Process                      (d) Staff
4. \_\_\_\_\_ is a program that is rapidly implemented and contains only a small part of the anticipated functionality of a complete system.
- (a) Application                      (b) Requirements  
(c) Analysis                         (d) Prototype
5. Expand UML.
- (a) United Markup Language  
(b) Unified Modeling Language  
(c) Union Model language  
(d) Unified Markup language

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6. UML has an associated textual language called  
(a) C++ (b) Java  
(c) Kotlin (d) OCL
7. \_\_\_\_\_ a logical entity, having a set of definable responsibilities or objectives, and consisting of hardware, software or both.  
(a) System (b) Sub system  
(c) Module (d) Class
8. \_\_\_\_\_ design of how data is persistently stored so that it may be accessed by many programs and users, over an indefinite period of time.  
(a) Protocol (b) Data base  
(c) Algorithm (d) Object
9. \_\_\_\_\_ is the process of deliberately trying to cause failures in a system in order to detect any defects that might be present.  
(a) Analysis (b) Testing  
(c) Design (d) Documentation
10. \_\_\_\_\_ software process model, is another view of incremental development that explicitly embraces prototyping and an iterative approach to software development.  
(a) Water fall (b) Prototype  
(c) Spiral (d) RAD

Page 3 Code No. : 40530 E

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Distinguish between custom, generic and embedded software.  
Or  
(b) What are the Difficulties and risks in software engineering?
12. (a) How to defining the problem and the scope?  
Or  
(b) Explain the Interview technique for gathering information.
13. (a) Explain the symbols used in class diagrams.  
Or  
(b) Draw a sequence diagram showing student registration process. Explain.
14. (a) Explain the top-down software design.  
Or  
(b) List out the Contents of a good architectural model.

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[P.T.O.]



15. (a) Comment on Black-box and glass-box testing.

Or

- (b) Give a testing strategy for performing Not terminating loop.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the principles object orientation.

Or

- (b) Examine the components involved in Software engineering.

17. (a) Discuss the Quality Requirements of the system.

Or

- (b) Illustrate the steps needed to change the requirements

18. (a) Write note on State diagram.

Or

- (b) Narrate the advanced features of class diagrams.

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19. (a) Discuss the Divide and conquer Software design principle.

Or

- (b) Describe an software architecture using UML.

20. (a) Explain the Defects in Numerical algorithms

Or

- (b) Write note on Water fall Software process model.
- 

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Reg. No. : .....

Code No. : 40531 E      Sub. Code : JMCA 52/  
SMCA 52

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Fifth Semester

Computer Application — Main

WEB TECHNOLOGY

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Who is making the web standards?
  - (a) Mozilla
  - (b) Microsoft
  - (c) The world wide consortium
  - (d) NVIDIA

2. WWW is based on which model?
  - (a) Local server
  - (b) Client – server
  - (c) 3 – tier
  - (d) None of these
3. HTML stands for?
  - (a) Hyper Table Markup Language
  - (b) Hyper Text Markup Language
  - (c) High Test Mark Language
  - (d) Hyper Tool Markup Language
4. Which tag the descriptive list starts?
  - (a) <DD>
  - (b) <L1>
  - (c) <DL>
  - (d) <DS>
5. Javascript is \_\_\_\_\_ side scripting Language.
  - (a) Server
  - (b) Client
  - (c) ISP
  - (d) Browser

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6. Local Browser used for validations on the web pages uses \_\_\_\_\_ .
- (a) Java
  - (b) CSS
  - (c) HTML
  - (d) JS
7. XML validated against a \_\_\_\_\_ is considered as valid XML.
- (a) JQUERY
  - (b) PARSER
  - (c) CFG
  - (d) DTD
8. W3C supports an XML based alternative to DTD called \_\_\_\_\_ .
- (a) XML schema
  - (b) XML parser
  - (c) XML DOM
  - (d) XML DP
9. CGI stand for \_\_\_\_\_ .
- (a) Common Gateway Interface
  - (b) Computer Gateway Interface
  - (c) Calculated Graphic Interface
  - (d) Cover Gateway Interface

Page 3 Code No. : 40531 E

10. What is extension of CGI Script?

- (a) .cg
- (b) .cgi
- (c) .cgt
- (d) .cgl

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write short note on WWW.

Or

- (b) Discuss about MIME.

12. (a) Explain History of HTML.

Or

- (b) Write short note on Advantages of CSS.

13. (a) Explain variables in Java Script.

Or

- (b) Discuss about Arrays.

14. (a) Explain the role of XML.

Or

- (b) Write short note on XML schema languages.

Page 4 Code No. : 40531 E

[P.T.O.]



15. (a) Describe about CGI Building blocks.

Or

(b) Explain limitations of cookies.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Detail about Web Architecture.

Or

(b) Explain in detail about HTTP.

17. (a) Explain about HTML and its tags.

Or

(b) Discuss about CSS.

18. (a) Explain operators in Java Script.

Or

(b) Detail about Java script Regular Expression.

19. (a) Explain elements and attributes in XML.

Or

(b) Discuss about purpose of DTP.

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20. (a) Detail about CGI.

Or

(b) Explain in detail about servlet life cycle.

\_\_\_\_\_

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Code No. : 40532 E      Sub. Code : JMCA 53/  
SMCA 53

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Fifth Semester

Computer Application — Main

RDBMS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1. Personal database packages are developed primarily for \_\_\_\_\_ user applications.
- (a) Multi                      (b) Two  
(c) Triple                      (d) Single

2. \_\_\_\_\_ is a character data type to store variable-length alphanumeric data in a column.
- (a) CHAR                      (b) VARCHAR2  
(c) NUMBER                      (d) DATE
3. Identify the DML statement used to modify the data in table.
- (a) INSERT                      (b) UPDATE  
(c) DEFINE                      (d) ADD
4. \_\_\_\_\_ wild card character represents zero or more characters.
- (a) &                      (b) %  
(c) -                      (d) #
5. \_\_\_\_\_ results from a multitable query that does not have WHERE clause.
- (a) Join                      (b) INTERSECT  
(c) UNION                      (d) Cartesian product
6. Name the set operator returns all rows from both queries, but duplicate rows are not repeated.
- (a) UNION                      (b) UNION ALL  
(c) INTERSECT                      (d) MINUS

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7. \_\_\_\_\_ is a sub program that can returns a value.
- (a) Function                      (b) Procedure  
(c) Subprogram                  (d) Module
8. Identify the data type in PL/SQL that contains a pointer to large binary object inside the database.
- (a) NLS                              (b) BLOB  
(c) CLOB                          (d) NCLOB
9. Which of the following executes the query and identifies the result set, consisting of all rows that meet the query search criteria.
- (a) Fetching with a Cursor  
(b) Opening a cursor  
(c) Fetching bulk data with a cursor  
(d) Close a cursor
10. Which Operator Returns TRUE if a subquery returns at least one row?
- (a) EXISTS                        (b) IN  
(c) IS NULL                       (d) LIKE

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Compare SQL with SQL Plus.
- Or
- (b) How to display the table information's?
12. (a) How to insert NULL value in a Column? Explain.
- Or
- (b) Explain the Logical and Comparison operators used in SELECT query.
13. (a) How to perform UPDATE using a subquery? Explain.
- Or
- (b) What is meant by Correlated subquery?
14. (a) Explain the various sections in PL/SQL block.
- Or
- (b) Write note on IF statement in PL/SQL.

Page 4 Code No. : 40532 E  
[P.T.O.]



15. (a) State the attributes of Implicit cursor.

Or

- (b) Illustrate the steps to declare a PL/SQL TABLE.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 800 words.

16. (a) Write note on Constraints.

Or

- (b) Discuss the SQL\*PLUS file-related commands

17. (a) Illustrate the Numeric functions with an example.

Or

- (b) Describe the common Number, Date and Time formats used in TO\_CHAR().

18. (a) How to modify and dropping a sequence? Explain.

Or

- (b) Write note on TOP-N Analysis.

Page 5 Code No. : 40532 E

19. (a) Illustrate the Looping structure in PL/SQL with example.

Or

- (b) Explain the PL/SQL data types.

20. (a) Illustrate the actions performed on an explicit cursor.

Or

- (b) Write note on PL/SQL VARRAYS.

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**Reg. No. :** .....

**Code No. : 30533 E      Sub. Code : JMCA 61/  
SMCA 61**

B.C.A. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Computer Application – Main

OPERATING SYSTEM

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. \_\_\_\_\_ is a program that acts as an intermediary between a user of a computer and the computer hardware.
  - (a) Word
  - (b) Operating system
  - (c) Web Server
  - (d) Web browser



2. \_\_\_\_\_ environment several users share the system simultaneously.  
(a) Real time system      (b) Multiprogramming  
(c) Windows OS            (d) Linux OS
3. Name process state when the process is being created  
(a) New                      (b) Running  
(c) Waiting                (d) Ready
4. Each process is represented in the operating system by a  
(a) IVT                      (b) Table  
(c) PCB                      (d) Module
5. \_\_\_\_\_ access to shared data may result in data inconsistency.  
(a) Concurrent            (b) Time shareing  
(c) Multiprocessing      (d) Single process
6. A \_\_\_\_\_ kernel allows a process to be pre-empted while it is running in kernel mode.  
(a) Non-preemptive      (b) Preemptive  
(c) Linux                    (d) Windows

7. \_\_\_\_\_ sits between main memory and CPU registers.
- (a) Magnetic tape      (b) Magnetic disk  
(c) Cache                (d) Pendrive
8. The concept of a logical address space that is bound to a separate \_\_\_\_\_ address space is central to proper memory management.
- (a) Logical                (b) Physical  
(c) Virtual                (d) RAM
9. \_\_\_\_\_ is a named collection of related information that is recorded on secondary storage.
- (a) Table                 (b) Record  
(c) File                    (d) Instruction
10. \_\_\_\_\_ level directory, all files are contained in the same directory.
- (a) Multi                 (b) Two  
(c) Single                (d) Three

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are the main purposes of an operating system?

Or

- (b) Mention the main differences between operating systems for mainframe computers and personal computers.

12. (a) Discuss about Process Control Block.

Or

- (b) Describe the differences among short-term, medium-term and long-term scheduling.

13. (a) Illustrate the solution to Critical-Section Problem.

Or

- (b) Explain the Bounded-Buffer Classical problem of synchronization.

14. (a) Explain about Contiguous memory allocation.

Or

- (b) Comment on Swapping.



15. (a) Give brief note on File attributes.

Or

(b) Explain the Direct Access File methods.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the abstract view of the computer system with diagram.

Or

(b) Write note Distributed systems.

17. (a) Discuss about Inter Process Communication.

Or

(b) Explain the Scheduling Criteria.

18. (a) Discuss about semaphore.

Or

(b) Write note on Dead lock.

19. (a) Explain features of Paging memory management system.

Or

(b) Describe the Architecture of Segmentation memory scheme.

20. (a) Narrate the operations performed in File.

Or

(b) Write note on Directory Structure.

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(6 pages)

Reg. No. : .....

**Code No. : 30534 E      Sub. Code : JMCA 62/  
SMCA 62**

B.C.A. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Computer Application – Main

**COMPUTER NETWORKS**

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. \_\_\_\_\_ networks have single communication channel that is shared by all the machines on the network.
  - (a) Point-to-point links
  - (b) Broad case
  - (c) Peer-to-peer
  - (d) Multicast



2. \_\_\_\_\_ covers a city. The best known example in the cable television network available in many cities.  
(a) LAN                                      (b) VAN  
(c) WAN                                        (d) MAN
3. Physical layer is responsible for movement of individual  
(a) Packet                                      (b) Bits  
(c) Frame                                        (d) Bytes
4. The physical layer translate logical communication requests from the \_\_\_\_\_ into hardware specific operations.  
(a) data link layer                            (b) network layer  
(c) transport layer                            (d) application layer
5. \_\_\_\_\_ provides a well-defined Service interface to the network layer.  
(a) Physical layer                            (b) Data link layer  
(c) Transport layer                            (d) Session layer
6. \_\_\_\_\_ connectionless service consists of having source machine send independent frames to the destination machines without having the destination machine acknowledge them.  
(a) Unacknowledged                            (b) Acknowledged  
(c) Signals                                      (d) Bits

7. The set of optimal routes from all sources to a given destination form a tree rooted at the destination, such a tree is called a \_\_\_\_\_ tree.
- (a) binary                      (b) AVL  
(c) BST                          (d) Sink
8. Static algorithm is \_\_\_\_\_, in which every incoming packet is sent out on every outgoing line except the one it arrives on
- (a) Dijkstra's                      (b) Adaptive  
(c) Flooding                      (d) Non-adaptive
9. The \_\_\_\_\_ translate internet domain and host name to IP address.
- (a) Domain Name System  
(b) Routing information protocol  
(c) Network protocol  
(d) SMTP
10. Application layer protocol defines
- (a) types of messages exchanged  
(b) message format, syntax and semantics  
(c) rules for when and how process sent  
(d) all of the mentioned.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write note on Local Area Networks.

Or

- (b) Explain the main categories of wireless networks.

12. (a) Describe the characteristics of Guided transmission media.

Or

- (b) Illustrate the features of Microwave transmission.

13. (a) What are the basic strategies for dealing with errors in computer networks.

Or

- (b) Discuss the algorithm for Unrestricted Simplex Protocol.

14. (a) What are the goals of Network layer?

Or

- (b) Describe the static routing algorithm flooding.



15. (a) Write note on symmetric-key signatures.

Or

(b) Summarize the principles of RSA method.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss about OSI Reference Model.

Or

(b) Narrate the critique of the TCP/IP Reference Model.

17. (a) Explain about Communication Satellites.

Or

(b) Mention the features of Fiber Optic Networks. Compare Fiber Optics with Copper Wires.

18. (a) Write note on simplex stop-and-wait protocol.

Or

(b) Describe the basic idea of an Pure ALOHA and Slotted ALOHA.

19. (a) Illustrate the general principles of congestion control.

Or

(b) Discuss about TCP.

20. (a) Write note on EMAIL.

Or

(b) Explain the importance of Cryptography.

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(6 pages)

Reg. No. : .....

**Code No. : 30696 E      Sub. Code : SMCA 63**

B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2020.

Sixth Semester

Computer Applications – Main

**COMPUTER GRAPHICS**

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The most widely used input device is the \_\_\_\_\_  
(a) Modem                      (b) Keyboard  
(c) Printer                      (d) Monitor
  
2. Name the component of an LCD panel, a plane metallic foil reflects back the incident beam.  
(a) Reflector                      (b) Liquid Crystal  
(c) Color polarize                      (d) Thin glass plate



3. In Bresenham's line algorithm, if the distances  $d_1 < d_2$  then decision parameter  $P_k$  is \_\_\_\_\_
- (a) Positive                      (b) Equal  
(c) Negative                      (d) Option (a) or (c)
4. Bresenham circle algorithm uses the approach of
- (a) Midpoint                      (b) Point  
(c) Line                          (d) Square
5. The transformation in which an object is moved from one position to another in circular path around a specified pivot point is called
- (a) Translation                  (b) Scaling  
(c) Rotation                      (d) Reflection
6. Basic geometric transformation include
- (a) Translation                  (b) Rotation  
(c) Scaling                        (d) All of these
7. Cohen-sutherland subdivision line clipping algorithm uses \_\_\_\_\_ regions with different codes.
- (a) 8                                (b) 6  
(c) 4                                (d) 9

8. A closed polygonal area in the device coordinate space that is used to display a part of the scene found in a window is called a
- (a) window
  - (b) viewport
  - (c) region
  - (d) segment
9. The method which is based on the principle of checking the visibility point at each pixel position on the projection plane are called
- (a) Object-space method
  - (b) Image-space method
  - (c) Segmentation
  - (d) Restoration
10. The types of hidden surface removal algorithm are
- (a) Depth comparison, Z-buffer, back-face removal
  - (b) Scan line algorithm, priority algorithm
  - (c) BSP method, area subdivision method
  - (d) All of these

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Comment on display adapter cards.

Or

- (b) Mention the components of an LCD panel.

12. (a) Illustrate the DDA algorithm for Circle generation.

Or

- (b) Explain the winding number method.

13. (a) How to perform 2D Scaling Transformation?()

Or

- (b) What is meant by Homogeneous Coordinate system?

14. (a) List out the steps used to performed viewing transformation.

Or

- (b) Explain the concepts of Parametric Clipping.



15. (a) Illustrate the Back faces using Dot product.

Or

(b) Define Cramer's rule.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Describe the operations of Computer graphics.

Or

(b) Draw a CRT and Explain its functions.

17. (a) Illustrate the Bresenham's Circle algorithm.

Or

(b) Explain the Solid Area Filling algorithms.

18. (a) How to perform 2-D Shearing transformation?  
Explain.

Or

(b) Explain the 3-D Scaling and 3-D Reflection transformation.

19. (a) Describe the working principles of Sutherland-Hodgeman Polygon Clipping algorithm.

Or

- (b) Narrate the Sutherland-Cohen midpoint subdivision algorithm.

20. (a) Explain Warnocks algorithm used to remove hidden surfaces with example.

Or

- (b) Discuss the insufficiency of object space methods.
-

(8 pages)

Reg. No. : .....

Code No. : 40355 E    Sub. Code : JNMA 3 B/  
JNMC 3 B/SNMA 3 B

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Mathematics/ Mathematics with CA —  
Non-Major – Elective

FUNDAMENTALS OF STATISTICS — I

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which is the two-dimensional diagram?
- (a) sphere
  - (b) cylinder
  - (c) rectangle
  - (d) cube.

2. A simple formula to obtain the estimate of appropriate class interval  $i =$

- (a)  $L + S$
- (b)  $\frac{L - S}{k}$
- (c)  $\frac{L + S}{k}$
- (d)  $L - S$ .

3. The geometric mean of numbers 2, 4, 8 is

- (a) 1
- (b) 2
- (c) 3
- (d) 4.

4. The mode of grouped frequency distribution is

- (a)  $l + \frac{\left(\frac{N}{2} - m\right) h}{f_h}$
- (b)  $l + \frac{hf_2}{f_1 + f_2}$
- (c)  $l - \frac{hf_2}{f_1 + f_2}$
- (d)  $l + \frac{hf_2}{f_1 - f_2}$ .

5. Which is correct?

- (a)  $Q.D. = \frac{1}{2} (Q_3 - Q_1)$
- (b)  $S.D. = \left[ \frac{1}{N} \sum f_i (x_i + \bar{x})^2 \right]^{1/2}$
- (c)  $\sigma^2 = s^2 + d^2$  where  $d = \bar{x} - A$ .
- (d)  $C.V. = \frac{\bar{x}}{\sigma} \times 100$ .

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6. The median of the numbers 2, 5, 4, 11, 8  
 (a) 2 (b) 4  
 (c) 5 (d) 8.
7. The range of the correlation coefficient is  
 (a) -1, 0 (b) 0, 1  
 (c) -1, 1 (d) 1,  $\alpha$ .
8. The formula for finding the rank correlation  
 (a)  $1 - \frac{6\Sigma(x-y)^2}{n(n^2-1)}$  (b)  $1 + \frac{6\Sigma(x-y)^2}{n(n^2-1)}$   
 (c)  $1 - \frac{6\Sigma(x+y)^2}{n(n^2-1)}$  (d)  $1 - \frac{6\Sigma(x-y)^2}{n(n^2+1)}$ .
9. The regression coefficient  $b_{xy} =$   
 (a)  $r \frac{\sigma_y}{\sigma_x}$  (b)  $r \frac{\sigma_x}{\sigma_y}$   
 (c)  $\frac{1}{r} \frac{\sigma_x}{\sigma_y}$  (d)  $\frac{1}{r} \frac{\sigma_y}{\sigma_x}$ .
10. If the regression coefficient of  $x$  on  $y$  is 0.4 and the regression coefficient of  $y$  on  $x$  is 0.9 then the correlation coefficient between  $x$  and  $y$  is  
 (a) 0.06 (b) 0.36  
 (c) 0.6 (d) 0.036.

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write down the objects of classification.

Or

- (b) The dividend given by Oswal Agro Mills Ltd. from 1983 to 1988 is given below :

Year :	1983	1984	1985	1986	1987	1988
Dividend (%) :	20	30	32	42	50	50

Represent the data by bar diagram.

12. (a) From the following data, compute the value of harmonic mean.

Marks :	10	20	25	40	50
No. of Students :	20	30	50	15	5

Or

- (b) The mean weight of 150 students in a certain class is 60 kg. The mean weight of boys in the class is 70 kg and that of girls in the class is 55 kg. Find the number of boys and girls in the class.

13. (a) Find (i) range (ii) standard deviation for the following marks of 10 students.

20, 22, 27, 30, 40, 48, 45, 32, 31, 35.

Or

- (b) Show that the variance of the first  $n$  natural numbers is  $\frac{(n^2-1)}{12}$ .

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[P.T.O.]



14. (a) Calculate Karl Pearsons coefficient of correlation from the following data :

Marks in Mathematics : 48 35 17 23 47

Marks in Statistics : 45 20 40 25 45

Or

- (b) Obtain the rank correlation coefficient for the following data :

$x$  : 2 1 4 3 5 7 6

$y$  : 1 3 2 4 5 6 7

15. (a) From the given equation to the two regression lines  $3x + 2y - 26 = 0$  and  $6x + y - 31 = 0$ , find the correlation coefficient between  $x$  and  $y$ .

Or

- (b) Construct the two regression lines from the following data :

	$x$	$y$
Mean	10	90
Standard deviation	3	12

Correlation coefficient 0.8.

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Explain the types of Bar diagram.

Or

- (b) Draw a Pie diagram for the following data of sixth five year plan public sector outlays.

Agriculture and Rural development	12.9%
Irrigation etc	12.5%
Energy	27.2%
Industry and minerals	15.4%
Transport and Communication etc	15.9%
Social services and others	16.1%

17. (a) Find the mean and median for the following frequency distribution :

Class :	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35
Frequency :	8	15	39	47	52
Class :	36 - 40	41 - 45	46 - 50	51 - 55	
Frequency :	41	28	16	4	

Or

- (b) Given that the mode of the following frequency distribution of the 70 students is 58.75. Find the missing frequencies  $f_1$  and  $f_2$ .

Class :	52 - 55	55 - 58	58 - 61	61 - 64
Frequency :	15	$f_1$	25	$f_2$

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18. (a) The following table gives the marks obtained by a group of 80 students in an examination. Calculate the variance.

Marks obtained :	10 - 14	14 - 18	18 - 22	22 - 26	26 - 30	30 - 34
No. of students :	2	4	4	8	12	16
Marks obtained :	34 - 38	38 - 42	42 - 46	46 - 50	50 - 54	54 - 56
No. of students :	10	8	4	6	2	4

Or

- (b) Compute Quartile Deviation from the following data :

$x$ :	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70
$y$ :	12	19	5	10	9	6

19. (a) Calculate the correlation coefficient for the following heights in inches of fathers ( $X$ ) and their sons ( $Y$ ).

$X$ :	65	66	67	67	68	69	70	72
$Y$ :	67	68	65	68	72	72	69	71

Or

- (b) Find the rank correlation coefficient for the following data :

$x$ :	68	64	75	50	64	80	75	40	55	64
$y$ :	62	58	68	45	81	60	68	48	50	70

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20. (a) (i) Write short notes on regression lines.  
 (ii) Out of the two lines of regression given by  $x + 2y - 5 = 0$  and  $2x + 3y - 8 = 0$  which one is the regression line of  $x$  on  $y$ .

Or

- (b) Obtain the two regression equations from the following data :

$x$ :	6	2	10	4	8
$y$ :	9	11	5	8	7

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2. If  $(AB) = 975$  and  $(AB) = 25$ , then  $A =$  \_\_\_\_\_

- (a) 1075                      (b) 950  
(c) 1000                      (d) 900

3. If the Laspeyre's and Paasche's index numbers are respectively ' $m$ ' and ' $n$ ' then the Fisher's index number is \_\_\_\_\_

- (a)  $\frac{m+n}{2}$                       (b)  $\sqrt{mn}$   
(c)  $\frac{2mn}{m+n}$                       (d)  $mn$

4. With usual notation, Laspeyre's index number is \_\_\_\_\_

- (a)  $\frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100$                       (b)  $\frac{\sum p_0 q_0}{\sum p_1 q_0} \times 100$   
(c)  $\frac{\sum p_0 q_1}{\sum p_1 q_1} \times 100$                       (d)  $\frac{\sum p_1 q_1}{\sum p_1 q_1} \times 100$

5. Geometric mean of Laspeyre's and Paasche's index number is \_\_\_\_\_

- (a) Bowley's                      (b) Fisher's  
(c) Marshall's                      (d) Kelly's

6. The arithmetic mean of Laspeyre's and Passche's index number is defined to be \_\_\_\_\_
- (a) Marshall index number  
 (b) Fisher's index number  
 (c) Fixed Base index number  
 (d) Bowley's index number
7. \_\_\_\_\_ index number is an ideal index number.
- (a) Paasche's                      (b) Fisher's  
 (c) Laspeyre's                      (d) Kelly's
8. Laspeyre's index number does not satisfy the \_\_\_\_\_
- (a) Time reversal test    (b) Factor reversal test  
 (c) Both (a) and (b)    (d) None of these
9. If  $d_i = y_i - f(x_i)$ , then the principle of least square is \_\_\_\_\_
- (a)  $\sum d_i$  is minimum    (b)  $\sum d_i$  is maximum  
 (c)  $\sum d_i^2$  maximum    (d)  $\sum d_i^2$  minimum



10. For fitting a straight line  $y = ax + b$ , the normal equations are

(a)  $a \sum x_i^2 + b \sum x_i = \sum x_i y_i; a \sum x_i + nb = \sum y_i$

(b)  $b \sum x_i^2 + a \sum x_i = \sum x_i y_i; b \sum x_i + na = \sum y_i$

(c)  $a \sum x_i^2 + b \sum x_i = \sum x_i y_i; b \sum x_i + na = \sum y_i$

(d)  $b \sum x_i^2 + a \sum x_i = \sum x_i y_i; a \sum x_i + nb = \sum y_i$

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Given the following positive class frequencies  
 $(A) = 9, (B) = 12; (AB) = 6, N = 20$ . Find  $(\alpha), (A\beta), (\alpha\beta)$ .

Or

(b) Given  $(A) = 30, (B) = 25, (\alpha) = 30, (\alpha\beta) = 20$ .  
Find

(i)  $N$

(ii)  $(\beta)$

(iii)  $(AB)$

(iv)  $(A\beta)$

(v)  $(\alpha B)$

12. (a) Find Laspeyre's index number

Commodities	$p_0$	$q_0$	$p_1$	$q_1$
A	1	10	2	5
B	1	5	1	2

Or

(b) Find Paache's index number

Commodities	$p_0$	$q_0$	$p_1$	$q_1$
A	2	10	3	12
B	7	21	9	25

13. (a) Find Bowley's index number

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	15	3	30	5
B	10	4	30	10

Or

(b) Find Marshall's Edgeworth index number

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	40	4	80	10
B	30	4	60	5

14. (a) Explain the characteristics of index numbers.

Or

- (b) Find Fisher's index number

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

15. (a) Fit a straight line to the following data :

$x:$	0	1	2	3	4
$y:$	1	1.8	1.3	2.5	2.3

Or

- (b) Fit a straight line to the following data :

$x$	0	1	2	3	4
$y:$	2.1	3.5	5.4	7.3	8.2



PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) If  $(A) = (\alpha) = (B) = (\beta) = N/2$ . Show that

(i)  $(AB) = (\alpha\beta)$

(ii)  $(A\beta) = (\alpha B)$

Or

(b) Given the following positive class frequencies. Find the remaining class frequencies.  $N = 20$ ,  $(A) = 9$ ;  $(B) = 12$ ;  $(C) = 8$ ,  $(AB) = 6$ ;  $(BC) = 4$ ;  $(CA) = 4$ .

17. (a) Find the missing price in the following data if the ratio between Laspeyre's and Paache's index number is 25 :24

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	1	15	2	15
B	2	15	-	30

Or

(b) Calculate Laspeyre's and Paache's index number

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

18. (a) Find Marshall Edgeworth index number.

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	5	50	7	60
B	6	40	8	50
C	4	120	5	110
D	3	30	4	35

Or

(b) Find Bowley's index number for the following data:

Commodities	Base year 1990		Current year 1992	
	Price	Quantity	Price	Quantity
A	2	10	3	12
B	5	16	6.5	11

Commodities	Base year 1990		Current year 1992	
	Price	Quantity	Price	Quantity
C	3.5	18	4	16
D	7	21	9	25
E	3	11	3.5	20

19. (a) Show that the following data satisfies time reversal.

Commodities	Base year		Current year	
	Price	Quantity	Price	Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

Or

- (b) Compute Fisher's index number and show that it satisfies time reversal test

Year	Tomoto		Brinjal		Onion	
	Price	Quantity	Price	Quantity	Price	Quantity
1980	4	50	3	10	2	5
1990	10	40	8	8	4	4

20. (a) Fit a straight line to the following data and estimate the value of  $y$  corresponding to  $x = 6$ .

$x$	0	5	10	15	20	25
$y$	12	15	17	22	24	30

Or

- (b) Show that the line of best fit to the following data is  $y = 8 - 0.5x$ .

$x$ :	6	7	7	8	8	8	9	9	10
$y$ :	5	5	4	5	4	3	4	3	3

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(6 pages)

Reg. No. : .....

Code No. : 40666 E Sub. Code : SSCA 3 A

B.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Computer Application — Main

Skilled Based Subject – PROGRAMMING WITH PHP  
and MYSQL

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. PHP is a \_\_\_\_\_ scripting language
  - (a) Server-side
  - (b) Client-side
  - (c) Middleside
  - (d) Outside

2. In PHP language variables names starts with \_\_\_\_\_
  - (a) ! (Exclamation)
  - (b) & (Ampersand)
  - (c) \* (Asterisk)
  - (d) \$ (Doller)
3. PHP's numerically indexed array begins with \_\_\_\_\_ position
  - (a) 1
  - (b) 2
  - (c) 0
  - (d) -1
4. In PHP, cookies are set by using \_\_\_\_\_ function
  - (a) Set Cookie ( )
  - (b) Set ( )
  - (c) Cookie set ( )
  - (d) None
5. To read a file character by character which function to use?
  - (a) fopen( )
  - (b) fread ( )
  - (c) fget ( )
  - (d) file ( )
6. The function fread ( ) has \_\_\_\_\_ parameters
  - (a) 2
  - (b) 3
  - (c) 4
  - (d) None

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7. Which of these field types would be best to hold?  
a. jpg image in MySQL
- (a) Char binary            (b) n Char binary  
(c) Text                    (d) Blob
8. Which of the following is a not valid aggregate function in MySQL?
- (a) Count                    (b) Min  
(c) Max                      (d) Compute
9. Which of the following command should be used to create a database named "student" in MySQL?
- (a) CREATE ? 1 student  
(b) CREATE DATABASE student  
(c) DATABASE 1 student  
(d) DATABASE student
10. Which of the following is the error function used in within catch block in MySQL?
- (a) ERROR - STATE  
(b) ERROR - STATUS  
(c) ERROR - MSG  
(d) All of the mentioned

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**PART B — (5 × 5 = 25 marks)**

**Answer ALL questions choosing either (a) or (b).**

**Each answer should not exceed 250 words.**

11. (a) Discuss the various features of PHP.  
  
Or  
(b) Define variables and write notes about its declaration in PHP.
12. (a) Write about any five array functions in php.  
  
Or  
(b) Write notes about recursive functions in php with example.
13. (a) Explain about reading character using fgetc function in php with example.  
  
Or  
(b) Discuss about checking if file exists in php with example.
14. (a) Write notes about subqueries in MySQL.  
  
Or  
(b) Discuss the various types of Aggregate functions in MySQL.

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[P.T.O.]





15. (a) Briefly explain about connecting MySQL with php database connectivity.

Or

- (b) Discuss about debugging in php.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about various looping statements in php with example.

Or

- (b) Explain about various datatypes in php.

17. (a) Explain about user-defined functions in php with example.

Or

- (b) Explain about cookies in php.

18. (a) Write notes about copying files in php with example.

Or

- (b) Explain about how to read or write binary files in php with example.

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19. (a) Explain various MySQL data types.

Or

- (b) Discuss about creation and manipulation of tables in MySQL.

20. (a) Explain about Exception handling in php with example.

Or

- (b) Write about various date and time functions in MySQL.

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Answer the Following:

1. A <sup>Central</sup> Control processing unit fabricated on a single chip of semiconductor is called:
  - a) Microprocessor
  - b) RAM
  - c) ROM
  - d) None of these
2. Which of these is the Components of Computer?
  - a) System Bus
  - b) CPU
  - c) Memory Unit
  - d) All of these
3. The signal sent to the device from the processor to the device after receiving an interrupt is
  - (a) Interrupt-acknowledge
  - (b) Return signal
  - (c) Service sigma
  - (d) Permission signal
4. The time between the receiver of an interrupt and its service is
  - (a) Interrupt delay
  - (b) Interrupt latency
  - (c) Cycle time
  - (d) Switching time
5. The \_\_\_\_\_ ensures that only one IC is active ~~at~~ <sup>at</sup> a time to avoid a bus conflict caused by two ICs writing different data to the same bus.
  - (a) Control bus
  - (b) Control instructions
  - (c) Address decoder
  - (d) CPU
6. CMA \_\_\_\_\_ the accumulator content.
  - (a) Counts
  - (b) Complements
  - (c) Cycles
  - (d) Rotates
7. RET instruction transfers the control from \_\_\_\_\_ to \_\_\_\_\_.
  - (a) main routine to sub routine
  - (b) sub routine to main routine
  - (c) subroutine to SP
  - (d) subroutine to IP
8. Stack Pointer is initialized with the \_\_\_\_\_ instruction
  - (a) PUSH
  - (b) LXI
  - (c) RET
  - (d) Pop
9. CALL BCD7SEG
  - (a) BCD7SEG is OPCODE
  - (b) CALL is subroutinc
  - (c) BCD7SEG is a subroutinc
  - (d) None of the above
10. RLC means
  - (a) Rotate Accumulator Right through carry
  - (b) Rotate Accumulator Left
  - (c) Rotate Accumulator Right
  - (d) Rotate Accumulator Left through carry

## Part-B (5 x 5 = 25 Marks)

11. a) Write a note on Memory and Instruction Fetch.  
Or  
b) Explain about the compiler and an interpreter.
12. a) Explain Peripheral or externally initiated operations.  
Or  
b) Write note on ALE, CS, RD and WR, CS, WR, RD?
13. a) Explain the execution of Sort Program.  
Or  
b) What is the interrupt? How the interrupts are classified?
14. a) Write about Conditional Call and return instructions.  
Or  
b) Write about ROM and memory mapped I/O.
15. a) write a note on Subroutine documentation and parameter parsing.  
Or  
b) Explain BCD addition and multi byte subtraction.



**Continuation Sheet**

PART – C (5 x 8 = 40 Marks)

16. a) Explain the various memory classification in detail.

Or

b) Explain the instruction format of 8085.

17. a) Describe the various logic operations of 8085.

Or

b) Discuss about the internal data operation and the 8085/8088A register.

18. a) Explain the following with example.

(a) BCD to Binary

(b) Binary to BCD

Or

b) Explain an 8085 assembly language program to find smallest number from an array of numbers.

19. a) Discuss in detail about 8085 multiple interrupt.

Or

b) Explain about the call & return instruction in detail.

20. a) With an assembly language program and explain the BCD to seven segment LED code conversion.

Or

b) Explain about the 8085 assembly language program to multiply two BCD numbers.

Part - A (10 x 1 = 10)

1. 'Slavery system' abolished in the year \_\_\_\_\_  
அ) 1843      ஆ) 1844      இ) 1845      ஈ) 1846

'Slavery system' abolished in the year \_\_\_\_\_  
a) 1843      b) 1844      c) 1845      d) 1846

2. 'சுவாமிநாதர்' இயக்கத்தின் மூலம் அறிமுகப்படுத்தப்பட்ட நெருங்கியவர் \_\_\_\_\_  
அ) ஈ. டி. நாயுடு      ஆ) நாயுடு நாயுடு நாயுடு நாயுடு  
இ) கந்தசாமி      ஈ) கந்தசாமி

3. 'Suga Mariyathai' 'Sukkam' introduced by whom?  
அ) E. V. Ramasamy      ஆ) Rajaram Mohan Roy  
இ) Nethaji      ஈ) Gandhiji

4. 'A good citizen must have \_\_\_\_\_'  
அ) Patriotism      ஆ) Good education      இ) Tolerance      ஈ) All the above

5. 'Women's issues were raised for the first time in \_\_\_\_\_ century.'  
அ) 19-ஆம் நூற்றாண்டு      ஆ) 18-ஆம் நூற்றாண்டு  
இ) 17-ஆம் நூற்றாண்டு      ஈ) 20-ஆம் நூற்றாண்டு

6. '\_\_\_\_\_ was the false consciousness of the historical process of the last 150 years.'  
அ) ஆதீன சிந்தனை      ஆ) கந்தசாமி சிந்தனை  
இ) கந்தசாமி சிந்தனை      ஈ) சுவாமிநாதர் சிந்தனை

a) Communalism b) Social status c) Communal riot d) None

6. மது பழக்கம் சமூகத்திற்கு பெரும்பாலும்  
அ) மது சூடு கட்டாயம் ஆகும் b) மது காரித் தீயங்களை  
உருவாக்கும் c) மது சமூகத்தை மீட்டும் d) மது சமூகத்தை  
அழித்துவிடும்

Alcoholism is a broad term generally used to mean \_\_\_\_\_

a) Compulsive drinking of alcohol b) Alcohol dependence Syndrome

Uncontrolled Consumption of alcoholic beverages d) All of these

7. தகவல் அமைதி சட்டம் 1984-ல் அறிவிக்கப்பட்டது  
-M.L. அமைதி சட்டம்  
a) 1984 ஆகும் b) 1985 ஆகும் c) 1986 ஆகும் d) 1987 ஆகும்  
Consumer Protection Act was introduced in the year \_\_\_\_\_  
a) 1984 b) 1985 c) 1986 d) 1987

8. தகவல் அமைதி சட்டம் 1984-ல் அறிவிக்கப்பட்டது  
சமூகத்தை அழித்துவிடும் தகவல் அமைதி சட்டம்  
அ) மது சமூகத்தை மீட்டும் b) மது சமூகத்தை  
அழித்துவிடும் c) மது சமூகத்தை மீட்டும்  
d) மது சமூகத்தை அழித்துவிடும்

Private enterprise dominated growth focuses on the ultimate objective of  
a) New economic policy b) Nationalisation  
c) Liberalisation d) All of the above

9. மனித உயர்வுகளை உருவாக்கும் சமூக மதிப்புகள் எவை?  
அ) தியாகம் b) சமூக நியாயம்  
c) உயர் மானம் d) மனித உயர்வுகளை  
From the following which is social values?  
a) Sacrifice b) Social Justice  
c) Awareness d) Customs

10. அரசாங்கத்திற்கும், குடிமகன்களுக்கும்  
இடையிலான சமூக மதிப்புகள் எவை?  
அ) குடும்ப மதிப்புகள் b) அரசியல் மதிப்புகள்  
c) தனிப்பட்ட மதிப்புகள் d) சமூக மதிப்புகள்  
Which values reflect the relationship between Government and individuals?  
a) Family Values b) Politics values  
c) Personal values d) Social values



Part-B (5 x 5 = 25)

11.9) சமூக நீதிக்கானத் தேவை என்ன?  
a. What is the need for Social Justice?

11.9) சமூக நீதியை (அ)  
பங்கிணை சிறுத்தியைத் தடுக்க.

b. Write a short note on role of Ambedkar in Social Justice.

12.9) Write a note on "Universal Declaration" of Human Rights.

12.9) பொது உரிமைகளுக்கான உலகளாவிய  
பரிந்துரை பற்றி எழுதுக.

13.9) குழந்தைப் பறவ இறப்புகளான காரணங்கள் யாவை?  
a. What are the causes of childhood deaths?

13.9) குழந்தைப் பறவ இறப்புகளான காரணங்கள்  
யாவை?

b. How does alcoholism affect the family life?

14.9) மதவாதத்தின் விளைவுகளாக  
பெரிய அளவு என்ன?

14.9) மதவாதத்தின் விளைவுகளாக  
பெரிய அளவு என்ன?

b. What are the benefits of Market economy?

15.9) சமூக மதிப்புகளின் நன்மைகளைக் குறிப்பிடுக.  
a. Mention the benefits of Social Values.

15.9) சமூக மதிப்புகளின் நன்மைகளைக்  
குறிப்பிடுக.

b. What is the various roles of ethics in Society?

Continuation Sheet

Part - C (5x8 = 40)

16. a) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
a. Analyse any two factors that promote Social Justice.

16. b) பெரியாரின் கருத்துரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
b. Explain Self respect movement of Periyar.

17. a) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
a. Examine the PUCH for the protection of Human Rights.

17. b) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
b. Analyse the women rights in India.

18. a) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
a. Enumerate the causes of Unemployment.

18. b) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
b. Discuss the Awareness programmes to prevent Alcoholism and Drug Abuse.

19. a) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
a. Explain the functions of Mass Media.

20. a) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
a. Trace the emergence of Globalization.

20. b) கீழ்க் குறிக்கப்பட்ட உரைகளைப் படித்துப் பின்வரும் கேள்விகளைக் கருத்துரைத்து விடவும்.  
b. Discuss the elements of Family values.

(10)

[P.T.O.]

Continuation Sheet

25. b) நெரிசலான உயிர் வாழும் நபர்களுக்கு  
கவலைகளைக் களைந்து கொடுப்பதற்கான  
புதிய விவரத்தை.

b. Discuss the duties and responsibilities  
of an ethical person.

X-----X



Reg. No. : .....

Code No. : 22202 B Sub. Code : SYOG3A

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Third Semester

Part — IV

YOGA

(For those who joined in July 2017 onwards)

Time : 1½ hours

Maximum : 50 marks

Answer ALL questions.

Choose the correct answer.

1. இரத்த சுழற்சி மண்டலத்தின் பகுதி எது  
(அ) சிறுநீரகம் (ஆ) நுபூரான்  
(இ) இதயம் (ஈ) நுரையீரல்
- The circulatory system consists of  
(a) Kidney (b) Neuron  
(c) Heart (d) Lungs

50. எந்த உபநிஷத்தில் “ஷாந்திலயக வித்யா” விவரிக்கப்பட்டிருக்கிறது?

- (அ) கதோ உபநிஷத்  
(ஆ) பிரிஹதரன்யகோ பனிஷத்  
(இ) அயத்ரெயொ பனிஷத்  
(ஈ) சந்திரோகியோ பனிஷத்

Which Upanishad described the 'Shandilya Vidya'?

- (a) Katha Upanishad  
(b) Brihadaranyako Upanishad  
(c) Aitareyo Upanishad  
(d) Chandogyo Upanishad

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2. மனித உடலின் கட்டமைப்பு மற்றும் செயல்பாடு அலகு  
ஆகும்.

- (அ) திசு (ஆ) செல்  
(இ) உறுப்பு (ஈ) அமைப்பு

The structural and functional unit of human body is

- (a) Tissue (b) Cell  
(c) Organ (d) System

3. 'யுஜ்' என்ற வார்த்தையின் பொருள்

- (அ) நுகர்வு  
(ஆ) சேர  
(இ) ஐக்கியப்பட வேண்டும்  
(ஈ) இவை அனைத்தும்

The word "yuj" means

- (a) to yoke (b) to join  
(c) to unite (d) all of these

4. பின்வருவனவற்றுள் சிவநந்தி யோகாவின் ஐந்து  
கோட்பாடுகளில் ஒன்றினைக் குறிப்பிடுக?

- (அ) சவாசனம் (ஆ) பக்தி  
(இ) ஞானம் (ஈ) தந்திரம்

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Which of the following is one of the Five Principles of Yoga by Sivanandi?

- (a) Savasana (b) bhakti  
(c) Jnana (d) tantra

5. ஒரு பொருள், படம், ஒலி இவற்றில் மனதை  
ஒருநிலைபடுத்துவது

- (அ) தாரணை (ஆ) தியானம்  
(இ) சமாதி (ஈ) பிரத்தியாகாரம்

Stabilize and focus the mind on one object, image, sound is

- (a) Dharana (b) Dhyana  
(c) Samadhi (d) Pratyahara

6. யோகாவில் எத்தனை கூறுகள் உள்ளன?

- (அ) ஆறு (ஆ) நான்கு  
(இ) எட்டு (ஈ) ஒன்பது

Yoga Consist of \_\_\_\_\_ Components

- (a) Six (b) Four  
(c) Eight (d) Nine

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7. நமது உடலில் உள்ள இரத்தம் என்பது ஒரு \_\_\_\_\_

- (அ) இணைப்பு திசு  
(ஆ) திரவ இணைப்பு திசு  
(இ) எபிதீலியல் திசு  
(ஈ) தசை திசு

Blood in our body is a

- (a) Connective tissue  
(b) Fluid connective tissue  
(c) Epithelial tissue  
(d) Muscular tissue

8. யோகா பயிற்சியை ஆரம்பிப்பதற்கு முன் உணவிற்கான சரியான இடைவெளி நேரம்

- (அ) 30 நிமிடங்கள் (ஆ) 60 நிமிடங்கள்  
(இ) 90 நிமிடங்கள் (ஈ) 2 மணி நேரம்

The appropriate amount of time to wait after a meal before beginning a yoga practice is

- (a) 30 minutes (b) 60 minutes  
(c) 90 minutes (d) 2 hours

9. சர்வதேச யோகா தினம் கொண்டாடப்படும் நாள் எது?

- (அ) 21 ஜூன் (ஆ) 21 ஏப்ரல்  
(இ) 21 ஜூலை (ஈ) 12 ஜூன்

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When we celebrate international yoga day?

- (a) 21 June (b) 21 April  
(c) 21 July (d) 12 June

10. தியான வகை ஆசனம் எந்த அமைப்பை கொண்டுள்ளது

- (அ) உட்கார்ந்து நிலை  
(ஆ) நின்று நிலை  
(இ) படுத்திருக்கிற நிலை  
(ஈ) மல்லாந்து படுத்திருக்கிற நிலை

Meditative Asana are the \_\_\_\_\_ postures

- (a) Sitting (b) Standing  
(c) Prone (d) Supine

11. யோகா முதலில் \_\_\_\_\_ என்று அழைக்கப்பட்டது?

- (அ) ஆசனம் (ஆ) கபாலபதி  
(இ) தியானம் (ஈ) சமநிலை உணவு

Yoga was first referenced as a form of

- (a) Asana (b) Kabalapati  
(c) Meditation (d) Balance diet

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12. பின்வருவனவற்றுள் எதனை அடைவதற்காக முன்னோர்களால் யோகா கற்பிக்கப்பட்டது.

- (அ) சரியான ஆரோக்கியம் பெற  
(ஆ) மன அமைதி பெற  
(இ) மன அழுத்த நிவாரணம் பெற  
(ஈ) அறிவொளி அல்லது சுய-உணர்ந்தலை பெற

The purpose of Yoga as taught by the ancients to attain

- (a) Perfect health  
(b) Peace of mind  
(c) Stress relief  
(d) Enlightenment or Self-realization.

13. "யோகா" என்ற வார்த்தை எந்த மொழிச் சொல்லிலிருந்து பிறந்தது.

- (அ) லத்தீன் (ஆ) உருது  
(இ) சமஸ்கிருதம் (ஈ) தமிழ்

The word "Yoga" is derived from

- (a) Latin (b) Urdu  
(c) Sanskrit (d) Tamil

14. ஹத்யோகா பிரதீபிகாவை தொகுத்தவர் யார்?

- (அ) பதஞ்சலி  
(ஆ) கிரந்தா  
(இ) சுவத்மரமா  
(ஈ) மேற்குறிப்பிட்டதில் எதுவும் இல்லை  
Who compiled 'Hathayoga pradipika'?  
(a) Patanjali (b) Gheranda  
(c) Svatmarama (d) None of the above

15. இட ஆளுமை திறன் என்பது

- (அ) சுயநினைவோடு  
(ஆ) சுயநினைவற்ற  
(இ) ஆழ் நிலை  
(ஈ) எதுவும் இல்லை

ID Personality Denotes \_\_\_\_\_

- (a) Conscious (b) Unconscious  
(c) Sub Conscious (d) None

16. டெஸ்டா அலைகளின் அலைவரிசை விநாடிக்கு \_\_\_\_\_ சுழற்சிகள் நிகழும்.

- (அ) 8 முதல் 12 வரை  
(ஆ) 30 முதல் 100 வரை  
(இ) 4 முதல் 7 வரை  
(ஈ) 1 முதல் 4 வரை





Delta waves occur frequency from \_\_\_\_\_ cycles per second.

- (a) 8 to 12 (b) 30 to 100  
(c) 4 to 7 (d) 1 to 4

17. சிறு குழுக்களுக்கு யோகா கற்பிப்பதில் பயனுள்ள அமர்வு ஏற்பாடு

- (அ) அரை சுற்று (ஆ) வட்ட அமைப்பு  
(இ) வரிசை (ஈ) நெடுவரிசை

For small groups, the effective seating arrangement in teaching yoga is \_\_\_\_\_

- (a) Semi circular (b) Circular  
(c) Row (d) Column

18. உடலுறுப்புகளின் ஆரோகியத்திற்கு உதவுவது எது?

- (அ) ஆசனங்கள் (ஆ) பிராணாயாமம்  
(இ) மந்திரங்கள் (ஈ) எதுவும் இல்லை

\_\_\_\_\_ help in the healthy functioning of the organism

- (a) Asanas (b) Pranayama  
(c) Mudras (d) None

19. சூர்யநமஸ்காரத்தில் எத்தனை வித்தியாசமான ஆசனங்கள் இருக்கின்றது?

- (அ) 12 (ஆ) 7  
(இ) 10 (ஈ) 8

How many different Asanas does Suryanamaskar comprise of?

- (a) 12 (b) 7  
(c) 10 (d) 8

20. திரிகொனாசனம் \_\_\_\_\_ தோற்றம் போல தோன்றுகிறது.

- (அ) முக்கோணம் (ஆ) மரம்  
(இ) அரை சக்கரம் (ஈ) தாமரை

Trikonasana looks like a \_\_\_\_\_ Posture.

- (a) Triangle (b) Tree  
(c) Half wheel (d) Lotus

21. பயனுள்ள போதனைக்கு, யோகா வகுப்புத் திட்டம் எப்போது தயார் செய்ய வேண்டும்?

- (அ) வகுப்பிற்கு ஒரு வாரத்திற்கு முன்பு  
(ஆ) வகுப்பிற்கு சற்று முன்பு  
(இ) வகுப்பிற்கு ஒன்று அல்லது இரண்டு நாட்கள் முன்பு  
(ஈ) வகுப்பு முடிந்தபிறகு

When shall be a Yoga lesson plan be prepared for an effective teaching?

- (a) One week before the class  
(b) Just before the class  
(c) One or two days before the class  
(d) After completion of the class



22. பிராணாயாமம் என்ற சொல்லிற்கு ————— என்று பொருள்.

- (அ) ஆற்றல் கட்டுப்பாடு  
(ஆ) ஆற்றல் இழப்பு  
(இ) நுட்பமான கை சைகைகள்  
(ஈ) உடல் வலிமை

The word Pranayama means

- (a) The regulation of energy  
(b) The dissipation of energy  
(c) Subtle hand gestures  
(d) The body strength

23. யோகா வகுப்பு பொதுவாக எவ்வாறு தொடங்குகிறது?

- (அ) ஒரு ஜெபத்தோடு  
(ஆ) சூர்யநமஸ்காரத்துடன்  
(இ) யோகிக் சக்ஷமா வயத்தோடு  
(ஈ) யோகாசனாவுடன்

The Yoga class usually begin with a

- (a) A Prayer  
(b) Suryanamaskar  
(c) Yogic Sukshma Vyayama  
(d) Yogasana

24. கபாலபதியில் எத்தனை வேறுபட்ட வகைகள் உள்ளன?

- (அ) 6 (ஆ) 9  
(இ) 4 (ஈ) 12

How many different types of kabalapathi?

- (a) 6 (b) 9  
(c) 4 (d) 12

25. கபாலபதி சிகிச்சையின் முக்கிய நன்மை —————

- (அ) கப நோய்களை அகற்றுவது  
(ஆ) பித்த கோளாறுகளை அகற்றுவது  
(இ) வாத கோளாறுகளை அகற்றுவது  
(ஈ) வாத-பித்த கோளாறுகளை அகற்றுவது

What is the main therapeutic benefit of Kapalabhati practice?

- (a) to remove kapha disorders  
(b) to remove pitta disorders  
(c) to remove vata disorders  
(d) to remove vata-pitta disorders



26. யோகா பயிற்சி கலை தனிநபரின் எதைக் கட்டுப்படுத்த உதவுகிறது?

- (அ) மனதை  
(ஆ) ஆன்மாவை  
(இ) உடலை  
(ஈ) மேலே உள்ள அனைத்தையும்

The art of practicing yoga helps in controlling an individual's \_\_\_\_\_

- (a) Mind (b) Soul  
(c) Body (d) All the above

27. கும்பகாவை பயிற்சி செய்ய பரிந்துரைக்கப்பட்ட சரியான நேரம் (பிராணாயாமம்)

- (அ) சூரிய உதயத்திற்கு முன்  
(ஆ) சூரிய அஸ்தமனத்திற்குப் பிறகு  
(இ) காலை மற்றும் மாலை  
(ஈ) காலை, மதியம், மாலை, நள்ளிரவு

What is the recommended time period for the practice of Kumbhaka (Pranayama)?

- (a) Before sunrise  
(b) After sunset  
(c) Morning and evening  
(d) Morning, midday, evening, midnight

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28. தலைமை சுரபி என்றழைக்கப்படும் நாளமில்லா சுரபி எது?

- (அ) கணையம் (ஆ) அடீனல்  
(இ) பிட்யூட்டரி (ஈ) பினியல்

Which Endocrine gland is Master gland in our body?

- (a) Pancreas (b) Adrenal  
(c) Pituitary (d) Pineal

29. கோப்ரா போஸ் என்று அழைக்கப்படுவது \_\_\_\_\_

- (அ) பத்மாசனம் (ஆ) சலபாசனம்  
(இ) பூஜங்காசனம் (ஈ) எதுவும் இல்லை

Cobra pose is also called as

- (a) Padmasana (b) Salabhasana  
(c) Bhujangasana (d) None

30. ஆசனம் எத்தனை வகைகளை அடிப்படையாக கொண்டது?

- (அ) மூன்று (ஆ) இரண்டு  
(இ) ஐந்து (ஈ) நான்கு

Asana based on how many types?

- (a) Three (b) Two  
(c) Five (d) Four

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31. கபாலபதி என்பது ஒரு ————— முறை.

(அ) பலப்படுத்தல்

(ஆ) தியானம்

(இ) சுத்தம் செய்தல்

(ஈ) இவற்றில் எதுவும் இல்லை

Kabalabhati is a ————— Process

(a) Strengthening (b) Meditation

(c) Cleaning (d) None of these

32. உஸ்ட்ரா என்பதன் பொருள்

(அ) மரம்

(ஆ) ஒட்டகம்

(இ) முயல்

(ஈ) பாம்பு

Ustra means

(a) The tree

(b) Camel

(c) Hare

(d) Snake

33. யோகாவிற்கு கடுமையான ————— தேவைப்படுகிறது.

(அ) வலிமை

(ஆ) மன ஒருநிலை

(இ) நெகிழ்வான உடல்

(ஈ) மேலே உள்ள அனைத்தும்

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Yoga is a strict discipline which requires

(a) strength

(b) an objective frame of mind

(c) flexible body

(d) all of the above

34. மாற்று நாசி சுவாசம் என அழைக்கப்படுவது —————

(அ) சித்தலி பிராணயாமம்

(ஆ) பிரம்மரி பிராணயாமம்

(இ) நாடிசோதனா

(ஈ) ஒன்றும் இல்லை

Alternate nostril breathing also called as

(a) Sitali Pranayama

(b) Bhramari pranayama

(c) Nadisodhana

(d) None

35. உடலின் சுத்திகரிப்புக்கு கவனம் செலுத்துகின்ற யோகாவின் பெயர் எது?

(அ) ஞான யோகா

(ஆ) ஹத யோகா

(இ) பக்தி யோகா

(ஈ) கர்ம யோகா

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Which system of yoga that focuses on the purification of the physical body?

- (a) Gnana Yoga (b) Hatha Yoga  
(c) Bhakti Yoga (d) Karma Yoga

36. தியானம் எப்போது செய்யலாம்?

- (அ) விடுமுறையில்  
(ஆ) வீட்டில்  
(இ) நடைபயிற்சியில்  
(ஈ) மேலே உள்ள அனைத்தும்

Meditation is practiced during

- (a) on vacation (b) at home  
(c) walking (d) all of the above

37. இஷ்வஸ்யோபனிஷதன் படி, பின்வரும் நடைமுறையானது அழியாமலிருக்க வழிவகுக்கிறது எது?

- (அ) வைராக்கியா (ஆ) விவேகா  
(இ) வித்யா (ஈ) விஷயா

Which of the following practice leads to immortality, according to Ishavasyopanishad?

- (a) Vairagya (b) Viveka  
(c) Vidya (d) Vishaya

38. சமாதி நிலை என்பது \_\_\_\_\_

- (அ) ஆனந்த நிலை (ஆ) தூக்க நிலை  
(இ) ஓய்வெடுக்கும் நிலை (ஈ) உட்கார்ந்த நிலை

Samadhi is

- (a) A trance or state of bliss  
(b) A state of sleep  
(c) A state of resting  
(d) A state of sitting

39. பிராணா என்பதன் பொருள்

- (அ) ஆற்றல் பெறுவது  
(ஆ) உடற்பயிற்சி  
(இ) நாட்பட்டது  
(ஈ) மேலே உள்ள அனைத்தும்

Prana means

- (a) Self-energing (b) Fitness  
(c) Chronic (d) All the above

40. மனித இதயத்தில் எத்தனை அறைகள் உள்ளன?

- (அ) இரண்டு அறைகள் (ஆ) மூன்று அறைகள்  
(இ) நான்கு அறைகள் (ஈ) அறைகள் இல்லை



How many Chambers in human heart?

- (a) Two chambers (b) Three chambers  
(c) Four chambers (d) No chambers

41. யோக சூத்ரா என்பது யாரால் வரையறுக்கப்பட்டது?

- (அ) பதஞ்சலி (ஆ) கெரண்ட்  
(இ) ஸ்வத்மரமா (ஈ) எதுவும் இல்லை

Who compiled 'Yoga Sutra'?

- (a) Patanjali (b) Gerund  
(c) Svatmarama (d) None of the above

42. மனதில் ————— நிலைகள் உள்ளன.

- (அ) இரண்டு (ஆ) நான்கு  
(இ) மூன்று (ஈ) ஐந்து

Mind consists of ————— stage.

- (a) Two (b) Four  
(c) Three (d) Five

43. யோகாவின் மிக முக்கியமான சகாதார விளைவுகளில் ஒன்று

- (அ) குழந்தைகளின் வேகமான வளர்ச்சி  
(ஆ) அழுத்தம் குறைப்பு  
(இ) புற்றுநோய் குணமடைதல்  
(ஈ) விரைவு நடவடிக்கை

One of the most prominent health effects of yoga is

- (a) Faster growth in children  
(b) Stress reduction  
(c) Cancer Cure  
(d) Quick action

44. எந்த பிராணாயாமா நடைமுறை தோல் மற்றும் கண்களுக்கு பயனுள்ளதாக இருக்கும்?

- (அ) நாடிசோதனா (ஆ) சித்தலி  
(இ) ப்பிரமரி (ஈ) எதுவும் இல்லை

Which pranayama practice is beneficial for skin and eyes?

- (a) Nadisodhana (b) Sitali  
(c) Bhramari (d) None

45. பின்புற தசைகள் மற்றும் முதுகெலும்பு நரம்புகளை உறுதிபடுத்தும் ஆசனம்

- (அ) பலனமுத்தாசனம் (ஆ) சேதுபண்தாசனம்  
(இ) மகராசனம் (ஈ) சலபாசனம்



Which asana tones up the back muscles and spinal nerves?

- (a) Pavanamutasana
- (b) Sethubandhasana
- (c) Makarasana
- (d) Salabhasana

46. ராஜ யோகா ————— எனவும் அழைக்கப்படுகிறது.

- (அ) அதிரடி செயல் யோகா
- (ஆ) பக்தி யோகா
- (இ) பாரம்பரிய யோகா
- (ஈ) உடலியல் யோகா

Raja yoga also called as

- (a) Action yoga
- (b) Devotion yoga
- (c) Classical yoga
- (d) Physical yoga

47. ————— உறுப்பு வாயு பரிமாற்றத்தில் ஈடுபடுகிறது.

- (அ) வயிறு
- (ஆ) நுரையீரல்
- (இ) கல்லீரல்
- (ஈ) சிறுநீரகம்

Organ is involved in exchange of gases

- (a) Stomach
- (b) Lungs
- (c) Liver
- (d) Kidney

48. "யோகா" என்ற சொல்லின் சொற்பிறப்பியல் சொற்பொழிவுக்கு சமஸ்கிருதத்தின் வினை வடிவம் எது?

- (அ) யக்
- (ஆ) யுகே
- (இ) யுஜ்
- (ஈ) யுஜே

Which is the Sanskrit root (verb form) for the etymological derivation of the word "Yoga"?

- (a) Yug
- (b) Yuge
- (c) Yuj
- (d) Yuje

49. கதோபநிசேத் தத்துவத்தின் படி யோகாவின் வரையறை

- (அ) மனதில் கட்டுப்பாடு
- (ஆ) உணர்வு உறுப்புகள், மனதில் மற்றும் அறிவாற்றல் மீது கட்டுப்பாடு
- (இ) உணர்வு உறுப்புகள் மற்றும் அறிவு கட்டுப்பாடு
- (ஈ) உடல் மற்றும் மனதில் கட்டுப்பாடு

Definition of Yoga according to Katha Upanishad

- (a) Control on mind
- (b) Control on sense organs, mind and intellect
- (c) Control on sense organs and intellect
- (d) Control on body and mind

