

22.07.19 Special Test Time: 1 hr

STD: XI (A-I) Comp.Science & Comp.Appn Marks: 50

I. Choose the correct answer: 10x1=10

1. How many bits constitute a word?
 - a) 8
 - b) 16
 - c) 32
 - d) determined by the processor used
2. Which of the following is a CISC processor?
 - a) Intel P6
 - b) AMD K6
 - c) Pentium III
 - d) Pentium IV
3. What is the smallest size of data represented in a CD?
 - a) blocks
 - b) sectors
 - c) pits
 - d) tracks
4. _____ is a volatile memory.
 - a) ROM
 - b) EPROM
 - c) PROM
 - d) RAM
5. _____ is bidirectional.
 - a) Data bus
 - b) Control bus
 - c) Register
 - d) Address bar
6. The Linux operating system was originated in the year _____.
 - a) 1991
 - b) 1997
 - c) 1980
 - d) 1993
7. The operating system provides _____ levels of securities to the end user.
 - a) four
 - b) five
 - c) six
 - d) three
8. _____ is an application software.
 - a) Linux
 - b) Unix
 - c) MS-word
 - d) Windows
9. Operating system is a _____.
 - a) Application software
 - b) Hardware
 - c) System software
 - d) Component
10. Interactive operating system provides _____.
 - a) GUI
 - b) Data distribution
 - c) Security
 - d) Real Time Processing

II. Answer any 6 of the following: 6x2=12

(Q.No.15 is compulsory)

11. What is an instruction?
12. Which source is used to erase the content of EPROM?
13. What is open source?
14. What is HDMI?
15. What is multi-user operating system?
16. List out the security levels provided by the operating system.
17. What is GUI?
18. List out the different distributions of LINUX operating system.

III. Answer any 6 in brief: 6x3=18

19. Classify the microprocessor based on the size of the data.
20. How will you differentiate a flash memory and an EEPROM?

21. Write a note on cache memory.

22. Explain the process management algorithms in operating system.

23. What are the advantages and disadvantages of Time-sharing features?

24. What are the types of Operating system? Explain.

25. Write a note on time sharing feature with an example.

26. What is Fault Tolerance?

IV. Answer any 2 in detail: 2x5=10

27. Explain the characteristics of a microprocessor.

28. Arrange the memory devices in ascending order based on the access time.

29. Explain the concept of distributed operating system.

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22.07.19 Special Test - Biology Time: 1 hr
 STD: XI (A-D) Bio-Botany Marks: 25

- I. Choose the correct answer: 5x1=5
- The haploid number of chromosome for Angiosperm is 14; the number of chromosome in its endosperm would be _____.
 a) 7 b) 14 c) 28 d) 42
 - Which of the plant group has gametophyte as a dominant phase?
 a) Angiosperms b) Bryophytes c) Pteridophytes
 d) Gymnosperms
 - Members of Phaeophyceae algae have this pigment to impart this colour _____.
 a) Chlorophyll, green colour b) Fucoxanthin, brown colour
 c) Haemocyanin, blue colour d) Phycoerythrin, red colour
 - _____ is not the method of reproduction.
 a) Endospore b) Conjugation c) Transduction
 d) Binary fission
 - The special flavour and aroma of the tea and tobacco are due to fermentation by _____.
 a) clostridium tertium b) Escherichia coli
 c) Mycococcus candidans d) Clostridium acetobutylicum
- II. Answer any 5 of the following: 5x2=10
- Distinguish between Anabolism and Catabolism.
 - Viruses are considered as 'Biological puzzle' – Discuss.
 - Draw and label T₄-Bacteriophage
 - Write a note on kingdom chromista.
 - What is Haplodiplontic life cycle? In which group it is seen?
 - What are the two types of wood seen in gymnosperms? Give example.
 - What is Ephedrine? Mention its use. Name the plant that yields this.
- III. Answer any 2 in detail: 2x5=10
- Describe the different types of stele seen in plants with neat diagram.
 - Difference between Gymnosperms and Angiosperms.
 - Difference between Gram positive and Gram negative bacteria

Bio-Zoology

Marks: 25

- I. Choose the correct answer: 3x1=3
- The organism which is a limbless amphibian is _____.
 a) Salamander b) Toad c) Snake d) Caecilian
 - The organism belonging to this phylum shows reterogressive metamorphosis _____.
 a) Hemichordates b) Cephalochordates c) Urochordates
 d) Echinoderms
 - This organism does not have heart _____.
 a) Salamander b) Ichthyophis c) Stingray d) Starfish
- II. Answer any four of the following: 4x2=8
- Why reptiles are successful terrestrial organisms?
 - What is meant by reterogressive metamorphosis?
 - What is meant by anadromous migration?
 - What is meant by Agnatha?
 - What is meant by Poikilotherms?
- III. Answer any three of the following: 3x3=9
- Differentiate Agnatha from Gnathostomes.
 - Differentiate osteichthyes from chondrichthyes.
 - Write about the unique features of cyclostomata.
 - What are the unique features of mammals.
- IV. Answer any one of the following: 1x5=5
- Differentiate chordates from non-chordates.
 - Write a note on flight adaptation in Aves.

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22.07.19 Special Test Time: 1.15 hrs
 STD: XI (E-I) Business Maths Marks: 50
 I. Choose the correct answer: 10x1=10

- If $nC_3 = nC_2$, then the value of nC_4 is _____.
 a) 2 b) 3 c) 4 d) 5
- The number of ways selecting 4 players out of 5 is _____.
 a) 4! b) 20 c) 25 d) 5
- The number of diagonals in a polygon of n seates is equal to
 a) nC_2 b) nC_2-2 c) nC_2-n d) nC_2-1
- Sum of the binomial coefficients is _____.
 a) 2^n b) n^2 c) $2n$ d) $n+17$
- The last term in the expansion of $(3 + \sqrt{2})^8$ is _____.
 a) 81 b) 16 c) $8\sqrt{2}$ d) $27\sqrt{3}$
- If $nPr = 720(nCr)$, then r is equal to _____.
 a) 4 b) 5 c) 6 d) 7
- The middle term in the expansion of $(x + \frac{1}{x})^{10}$ is _____.
 a) $10C_4(\frac{1}{x})$ b) $10C_5$ c) $10C_6$ d) $10C_7x^4$
- If $\frac{kx}{(x+4)(2x-1)} = \frac{4}{x+4} + \frac{1}{2x-1}$ then k is equal to _____.
 a) 9 b) 11 c) 5 d) 7
- The number of 3 letter words that can be formed from the letters of the word number when the repetition is allowed are
 a) 206 b) 133 c) 216 d) 300
- The number of ways to arrange the letters of the word "CHEESE"
 a) 20 b) 240 c) 720 d) 6

II. Answer any 4 from the following: 4x2=8

- Evaluate $\frac{n!}{r!(n-r)!}$ when $n=5$ and $r=2$
- Evaluate $\frac{7!}{6!}$
- In a railway compartment, 6 seats are vacant on a bench. In how many ways can 3 passengers set on them?
- If $(n+2)! = 60[(n-1)]!$ Find n.
- Define Permutations.
- If each objective type questions having 4 choices, then find the total number of ways of answering the 4 questions.

III. Answer any 4 from the following: 4x3=12

- How many five digits telephone numbers can be constructed using the digits 0 to 9 if each number starts with 67 with no digit appears more than once?

18. Resolve into partial fractions: $\frac{1}{x^2-1}$

19. Resolve into partial fractions: $\frac{5x+7}{(x-1)(x+3)}$

20. Show that $10P_3 = 9P_3 + 3.9P_2$

21. How many 3 digits numbers can be formed if the repetition of digits is not allowed?

22. Resolve into partial fractions: $\frac{7x-1}{x^2-5x+6}$

IV. Answer any 4 from the following: 4x5=20

23. Resolve into partial fractions: $\frac{x+4}{(x^2-4)(x+1)}$

24. Resolve into partial fractions: $\frac{1}{(x-1)(x+2)^2}$

25. How many number lesser than 1000 can be formed using the digits 5, 6, 7, 8 and 9 if no digit is repeated?

26. Find the values of A, B and C if $\frac{x}{x-1} + \frac{B}{x+1} + \frac{C}{(x+1)^2}$

27. Resolve into partial fraction $\frac{9}{(x-1)(x+2)^2}$