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Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U5S31

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Fifth Semester

Computer Science and Engineering

21UGS531 - REASONING ANDAPTITUDE

(Regulation 2021)

(Common to ECE, IT, CSBS, CSD, AIDS and CSE(AI & ML))

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is the missing number in the proportion 4:13 :: 64:_____ CO1- App

   (a) 168 (b) 198 (c) 208 (d) 228

2. If k% of k is 1.21. Then find k? CO1- App

   (a) 11 (b) 1.1 (c) 110 (d)1100

3. A boy is now twice as old as his sister, four years ago, he was thrice as old as her. What are their ages now? CO1- App

   (a) 18, 9 (b)14, 7 (c) 16, 8 (d)12, 6

4. A car moves at the speed of 90 km/hr. The speed of the car is CO1- App

   (a) 20 m/sec (b) 250 m/sec (c) 324 m/sec (d) 25 m/sec

5. Find the number of ways the letters of the word ‘WINNER’ can be arranged? CO1- App

   (a) 720 (b) 360 (c) 180 (d) 120

6. Which of the following diagrams indicates the best relation between Pigeon, Bird and Dog? CO2- Un

   (a)  (b)  (c)  (d) 

7. Sorrow : Death :: Happiness : ? CO2- App

   (a) Love (b) Dance (c) Cry (d) Birth

8. In a certain code, KAVERI is written as VAKIRE, How is MYSORE written in that code? CO2- App

(a) SYMROE (b) SYMEOR (c) SMYERP (d) None of these

9. Find the missing term, 6, 13, 28, 59, ? CO2- App

(a) 111 (b) 113 (c)114 (d)122

10. A girl introduced a boy as the son of the daughter of the father of her uncle. The boy is the girl's CO2- App

(a) Brother (b) Son (c) Uncle (d) Son-in-law

PART – B (10 x 2= 20 Marks)

11. The average of four consecutive even numbers is 27. Find the smallest of these numbers. CO1- App

12. Sum of the ages of mother and son is 32 years. After 4 years mother's age will be 28 years then son's present age is____. CO1- App

13. When the interest is compounded half-yearly, the amount is _____. CO1- App

14. 1 m/sec = _____ km/hr. CO1- App

15. nCr = _____. CO1- App

16. P is the mother of Q, Q is the sister of R, T is the brother of S, S is the husband of P, then T is the _____ of R. CO2- App

17. How many squares in a 8 x 8 chess board? CO2- App

18. Find the odd man out 473, 521, 792, 176, 682, 385. CO2- App

19. L169N, O256Q, R361T,____, X625Z. CO2- App

20. 6*7 : 169 :: 9*10 : _____. CO2- App

PART – C (5 x 12= 60 Marks)

Answer any **five** of the following questions

21. (i) If A : B = 6 : 5, B : C = 5 : 8 and C : D = 7 : 9 then find the ratio of CO1- App (12)
(a) A : B : C : D (b) A : C (c) B: D
(ii) If the population of a village is 50,000. 40% of them are men, 20% of them are children and the rest are women. Then find the number of men, women and childrens.

22. (i) If the ratio of fathers age to son's age is 4 : 1 and the product of their ages is 196, then find their ages after 5 years. Also find the ratio of their ages after 5 years will be? CO1- App (12)
(ii) A tradesman sold an article at a loss of 20%. If the selling price had been increased by □100, these would have been a gain of 5%. What was the cost price of the article?

23. (i) A man reaches his office 20 min late, if he walks from his home at 3 km per hour and reaches 30 min early if he walks 4 km per hour. How far is his office from his house? CO1- App (12)

(ii) A and B can complete a work individually in 12 days and 18 days. They started doing the work together but after 4 days A had to leave and B alone completed the remaining work. How many days the whole work was completed.

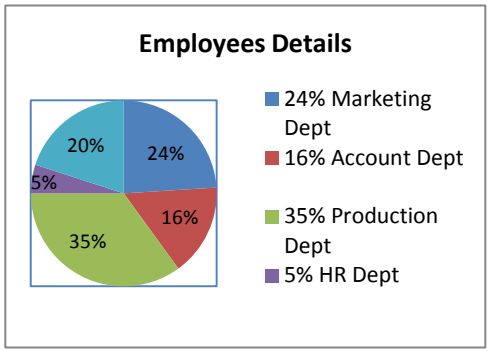
24. (i) A well shuffled pack of 52 cards, a card is drawn at random, find the probability of diamond or king card? CO1- App (12)

(ii) The cost of Type 1 rice is Rs. 15 per kg and Type 2 rice is Rs.20 per kg. If both Type 1 and Type 2 are mixed in the ratio of 2 : 3, then find the price per kg of the mixed variety of rice?

25. Study the table and pie chart carefully to answer the questions. CO2 -App (12)

Percentage breakup of employees working in various departments of an organization

Number of males in departments



Production Department	245
HR Department	12
IT Department	74
Marketing Department	165
Accounts Department	93

Total number of employees=800

A) How many Female members working in the Accounts department?

B) What is the ratio between male and female members in the HR Department?

C) The number of males working in the production department of the organization forms what percentage of the total number of employees working in that department?

D) Find the total number of female members in the organization?

E) What is the respective ratio of the number of males working in the marketing department to the number of females working in the department?

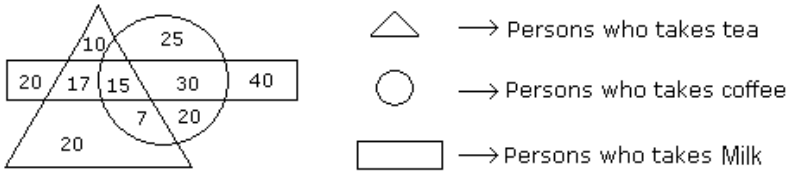
F) How many departments have working more female members?

26. Read the following information carefully and answer the questions given below: CO2- App (12)

- In a family, there are six members P, Q, R, S, T and U.
- P and Q are married couple, P is the wife.
- S is the only daughter of R who is the sister of P.
- T is brother of S.
- Q is son- in- law of U, whose wife is has died.

(a) How is U related to P?
(b) How is T related to R?
(c) How is R related to Q?
(d) How many male members are there in the family?
(e) How is P related to T?

27. Study the diagram given below and answer each of the following questions: CO2- App (12)



(1) How many persons who take only Coffee?
(2) How many persons are there who take both tea and Milk but not Coffee?
(3) How many persons take Tea?
(4) How many persons are there who takes Coffee and Tea only?
(5) How many persons take all the three?
(6) How many person takes only Milk?

28. (i) Ajay walks 24 km towards East and turns to right hand side and takes a drive of another 10 km. He then turning to his right (drives towards West) another 10 km. He then turns to his left & walks another 8 km. After that, he turns to his right & travels 14 km. How far is he from his initial point & in which direction? CO2- App (12)

(ii) **Directions to Solve:**In each of the following questions two statements are given and these statements are followed by two conclusions numbered (1) and (2). Read the conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.

Give answer:

(A) If only (1) conclusion follows (B) If only (2) conclusion follows
(C) If either (1) or (2) follows (D) If neither (1) nor (2) follows and (E) If both (1) and (2) follow.

Statements: Some ants are parrots. All the parrots are apples.
Conclusions: (1) All the apples are parrots. (2) Some ants are apples.