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Question Paper Code: R5031

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2025

Fifth Semester

Computer Science and Engineering

R21UGS531 - REASONING AND APTITUDE

(Regulation 2021)

(Common to IT, CSBS, AIDS, CSD, AIML, IOT and Cyber Security)

Duration: Three hours

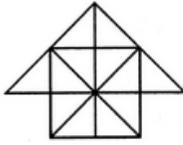
Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. The length and breadth of a board are 4m and 200cm, then find the ratio of the length and breadth CO1- App
(a) 1 : 2 (b) 2 : 1 (c) 1 : 50 (d) 50 : 1
2. 8.4% of a is 42. Then the value of a is CO1- App
(a) 500 (b) 100 (c) 1000 (d) 50
3. At what rate of simple interest will a certain sum be doubled in 10 years CO1- App
(a) 20% (b) 8% (c) 10% (d) 15%
4. 5 monkeys eat 5 bananas in 5 minutes, then 3 monkeys eat 3 bananas in _____ minutes. CO1- App
(a) 5 (b) 15 (c) 3 (d) 10
5. The value of nPn is CO1- App
(a) n (b) 0 (c) 1 (d) $n!$
6. How many times do the hands of a clock form a right angle in a day? CO1- App
(a) 22 (b) 24 (c) 44 (d) 48

7. Find the number of triangles in the given figure. CO2- App



- (a) 20 (b) 24 (c) 25 (d) 28

8. A is to the south of B, and C is to the east of B; in which direction is A with respect to C? CO2- App

- (a) North-east (b) North-west (c) South-east (d) South-west

9. Find the odd man out 1, 4, 27, 64, 3125 CO2- App

- (a) 4 (b) 27 (c) 64 (d) 3125

10. In a certain code language PINK is written as QHOJ and BOLD is written as CNMC. How will WIND be written in that code? CO2- App

- (a) VHOF (b) XHOC (c) XHOE (d) VHMC

PART – B (10 x 2= 20 Marks)

11. The average of the first 17 odd numbers is _____. CO1- App

12. A table is selling ₹ 2470 at a loss of 5% then the C.P is _____. CO1- App

13. If 48% of 48 = 64% of x, then x is _____. CO1- App

14. In _____ years will ₹ 2,000 amount to ₹ 2,400 at 10% per annum simple interest? CO1- App

15. In _____ different ways can the letters of the word BANANA be arranged? CO1- App

16. The last day of the century can be _____, _____, _____, _____. CO1- App

17. $4^3 + 4 : 68 :: 7^3 + 7 : \underline{\hspace{2cm}}$ CO2- App

18. Draw the suitable diagrams to indicate the best relation between Earth, Sea, and Sun. CO2- App

19. P is the mother of K; K is the sister of D; D is the father of J. Then P is the _____ of J. CO2- App

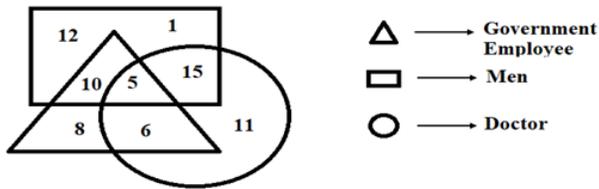
20. Fill the blank in the series: A, CD, GHI, MNOP, _____. CO2- App

PART – C (5 x 12= 60 Marks)

Answer any **five** of the following questions

21. (i) Given ratios are $A : B = 2 : 3$, $B : C = 5 : 2$, $C : D = 1 : 4$. CO1- App (12)
Find (a) $A : B : C : D$ (b) $B : D$ (c) $A : C$
(ii) In the first 12 overs of a cricket match, the run rate was 5.5. What should be the run rate in the remaining 38 overs to reach the target of 300 runs?
22. (i) In a school of 1400 students, there are 420 girls. Find the CO1- App (12)
number of boys in the school and also find the percentage of boys in the school.
(ii) A father is currently three times as old as his son. Five years ago, he was four times as old as his son. Find the current ages of the father and the son.
23. (i) In a factory, 20 people can make 20 toys in 15 days, working 10 CO1- App (12)
hours per day. Then, in how many days can 25 people make 30 toys working 20 hours per day?
(ii) In how many ways can the letters of the word “LOGICAL” be arranged in such a way that all the vowels always come together?
24. (i) A is faster than B. A and B each walk 24 km. The sum of their CO1- App (12)
speed is 7 km/hr, and the sum of their time taken is 14 hours. Then find their Speeds.
(ii) What is the probability of getting
(a) 53 Mondays in a leap year?
(b) 52 Thursdays in a non-leap year?
25. (i) Find the angle and reflex angle between the minute hand and CO1- App (12)
the hour hand of a clock when the time is 11:55?
(ii) What was the day of the week on 28th March, 2011?
26. Read the following information and answer the questions given CO2- App (12)
below it:
- A is the father of C. But C is not his son.
 - E is the daughter of C. F is the spouse of A.
 - B is the brother of C. D is the son of B.
 - G is the spouse of B. H is the father of G.
- (i) Who is the grandmother of D?
(ii) Who is the son of F?
(iii) How is A related to G?
(iv) How is B related to E?
(v) Who is the grandson of H?

27. Study the following figure and answer the questions given below. CO2- App (12)



- (a) How many Female doctors are there?
 (b) How many Government employees, but not doctors?
 (c) How many men are neither doctors nor government employees?
 (d) How many men are government doctors?
 (e) How many of them are Government employees?
 (f) How many women are government employees but not doctors?
28. (i) Swathi starts her office by car, 12 km towards the West, and turns left and goes 5 km to reach her home. What is the shortest distance between her office and in which direction is she from the office? CO2- App (12)
- (ii) (a) In a certain code BROKE is written as 53196 and DREAM is written as 73624. How is ROAD written in that code?
 (b) Find the odd man out of BD, HK, MP, NQ, SV, WZ.
 (c) Find the missing letters 1I9, 2P8, 3U7, 4X6, ____.