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Code No. : 22661

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

M.E./M.Tech II-Semester Main Examinations, August-2023

Skill Development Course-II – Soft Skills (Aptitude)

(Common to all branches)

Time: 2 hours

Max. Marks: 40

Note: Answer ALL questions in Part-A and any FIVE from Part-B
Calculator are not permitted for this test.

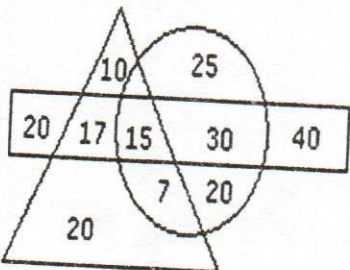



Part-A (5 × 1 = 5 Marks)

Q.No.	Stem of the question	M	L	CO	PO
1.	What is the remainder when 123456.....4647484950 is divided by 16? A. 6 B. 4 C. 12 D. Cannot be determined	1	1	1	12
2.	The average age of three members is 40 years and there ages are in the proportion 5:3:2. Find the age of youngest member. A. 36 B. 26 C. 34 D. 30	1	1	2	12
3.	In how many ways can the letters of the word 'LEADER' be arranged? A. 72 B. 144 C. 360 D. 720 E. None of these	1	1	3	12
4.	If the C.P is 75% of the selling price, then What is the profit percent? A. 33.3% B. 25% C. 16.66% D. 20%	1	2	4	12
5.	At what time between 5 and 6 o' clock are the hands of a 3 minutes apart? A. 24min B. 12min C. 13min D. 14min	1	1	5	12
Part-B (5 × 7 = 35 Marks)					
6. a)	i. When 335 is added to 5A7, the result is 8B2. 8B2 is divisible by 3. What is the largest possible value of A? A. 8 B. 2 C. 1 D. 4 ii. The digit in unit's place of the product $(2153)^{167}$ is : A. 1 B. 3 C. 7 D. 9 E. None of these iii. The average of first nine multiples of 3 is : A. 12.0 B. 12.5 C. 15.0 D. 18.5 iv. Find the two numbers whose L. C. M. is 1188 and H. C. F. is 9— A. 27, 396 B. 9, 27 C. 36, 99 D. Data inadequate	4	1 2 2 3	1	12
b)	i. The greatest number of four digits which is divisible by each one of the numbers 12, 18, 21 and 28 is— A. 9848 B. 9864 C. 9828 D. 9636 ii. The difference between the squares of two consecutive numbers is 35. The numbers are— A. 14, 15 B. 15, 16 C. 17, 18 D. 18, 19 iii. The largest 5 digit number exactly divisible by 84 is: A. 99960 B. 99955 C. 99952 D. 99956	3	2 2 3	1	12

7. a)	<p>i. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is: A. 2 : 5 B. 3 : 5 C. 4 : 5 D. 6 : 7</p> <p>ii. A bag contains 25, 50 and 10 paise in the ratio 6:4:9, amounting to Rs. 440. Find the number of coins of each type respectively. A. 600,400,900 B. 900,600,400 C. 500,250,700 D. 250,500,700</p> <p>iii. Vibhor started a retail business by investing Rs 50,000. After six months Keisham joined him with a capital of Rs 80,000. After 3 years. They earned a profit of Rs 24,500. What was the Vibhor's share in the profit? A. Rs 5500 B. Rs 8500 C. Rs 10500 D. Rs 2650 E. None of these</p> <p>iv. A and B together can dig a trench in 12 days, which an alone can dig in 30 days. In how long B alone can dig it? A. 18 days B. 19 days C. 20 days D. 21 days</p>	4	2 3 4 2	2	2	12
b)	<p>i. The ratio of present ages of Sri and Gowtham is 3: 4. Mahesh is 6 years older than Sri and two years younger than Gowtham. Find the sum of the present ages of Sri and Mahesh? A. 48 years B. 50 years C. 52 years D. 54 years E. None of these</p> <p>ii. P starts business with Rs.4500 and after 9 months, Q joins with P as his partner. After a year, the profit divided in the 3 : 5. What is Q's contribution in the capital? A. Rs.5,000 B. Rs.10,000 C. Rs.20,000 D. Rs.30,000 E. None of these</p> <p>iii. A father said to his son, 'I was as old as you are at present at the time of your birth.' If the father's age is 38 years now, the son's age five years back was: A. 14 years B. 19 years C. 33 years D. 38 years</p>	3	3 3 2	2	2	12
8. a)	<p>i. How many rectangles can be formed out of a chess board? A. 204 B. 1230 C. 1740 D. 1296</p> <p>ii. Find out the distinct four-letter words that can be formed using the word SINGAPORE? A. 256 B. 1024 C. 3024 D. 2048</p> <p>iii. How many permutations of 4 different letters are there, chosen from the twenty six letters of the alphabet? A. 14,950 B. 23,751 C. 358,800 D. 456,976</p> <p>iv. Ten points are marked on a straight line and eleven points are marked on another straight line. How many triangles can be constructed with vertices from among the above points? A. 495 B. 550 C. 1045 D. 2475</p>	4	4 4 4 4	3	3	12
b)	<p>i. What is the probability that an leap year has 53 Mondays? A. 1/7 B. 2/7 C. 48/53 D. 2/7</p> <p>ii. In a lottery there are 20 prizes and 15 blanks. What is the probability of getting prize? A. 1/10 B. 2/5 C. 4/7 D. 2/7</p>	3	2 2 1	3	3	12

	iii. What is the probability that a number selected from the numbers 1, 2, 3, 4, 5 16 is a prime number? A. 1/16 B. 5/8 C. 3/8 D. 7/16				
9. a)	<p>i. A man sold two houses for Rs. 7.8 lakhs each. On the one, he gained 5% and on the other, he lost 5%. What percent is the effect of the sale on the whole? A. 0.25% loss B. 0.25% gain C. 25% loss D. 25% gain</p> <p>ii. Akash sold an item for Rs.8400 and incurred a loss of 25%. At what price should the item be sold to have gained a profit of 40%? A. Rs.15,680 B. Rs.16,220 C. Rs.14,540 D. Cannot be determined E. None of the above</p> <p>iii. If the price of a book is first decreased by 25% and then increased by 20%, then the net change in the price will be : A. 10% B. 20% C. 30% D. 40%</p> <p>iv. If the cost price of 12 pens is equal to the selling price of 8 pens, the gain percent is ? A. 12% B. 30% C. 50% D. 60%</p>	4	3	4	12
b)	<p>i. A man spends 35% of his income on food, 25% on children's education and 80% of the remaining on house rent. What percent of his income he is left with ? A. 6 % B. 8 % C. 10 % D. 12 %</p> <p>ii. A's salary is 40% of B's salary which is 25% of C's salary. What percentage of C's salary is A's salary ? A. 10 B. 20 C. 30 D. 40</p> <p>iii. Of the 1000 inhabitants of a town, 60 % are males of whom 120 % are literate. If, of all the inhabitants, 25% are literate, then what percent of the females of the town are literate ? A. 32.5 % B. 43 % C. 46.6 % D. 53.2 %</p>	3	3	4	12
10. a)	<p>i. Statements: Some dogs are bats. Some bats are cats. Conclusions: I. Some dogs are cats. II. Some cats are dogs. A. Only I conclusion follows B. Only II conclusion follows C. Either I or (2) follows D. Both I and II follow E. Neither I nor II follows</p> <p>ii. Statements: All medals are awards. All rewards are medals. Conclusions:</p>	4	4	5	12

	<p>I. All rewards are awards. II. All awards are medals. A. if only conclusion I follows. B. if only conclusion II follows. C. if either conclusion I or conclusion II follows. D. if neither conclusion I nor conclusion II follows. E. if both conclusion I and conclusion II follow.</p> <p>iii. In a certain code language blue is called green, green is called yellow, yellow is called white, white is called red, red is called purple, purple is called orange. Then what is the color of milk? A. White B. Red C. Green D. Orange E. Purple</p> <p>iv. Find the angle between the hour hand and the minute hand of a clock when the time is 3.25 A. 47.5 degrees B. 57.5 degrees C. 45.5 degrees D. 55.5 degrees</p>					
b)	<p>i. In a certain code language COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language? A. MFEDJJOE B. EOJDEJFM C. MFEJDJOE D. EOJDJEFM</p> <p>ii. If Z = 52 and ACT = 48, then BAT will be equal to A. 39 B. 41 C. 44 D. 46</p> <p>iii. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH? A. 246173 B. 214673 C. 214763 D. 216473</p>	3	2 2 2	4	12	
11. a)	<p>i. A man can row a boat at a speed of 20 km/hr in still water. If the speed of the stream is 5 km/hr, How long can he row a distance of 75 km downstream? A. 1.5 hours B. 2 hours C. 2.5 hours D. 3 hours</p> <p>ii. The two trains of lengths 400 m, 600 m respectively, running at same directions. The faster train can cross the slower train in 180 sec, the speed of the slower train is 48 kmph. Then find the speed of faster train ? A. 68 kmph B. 52 kmph C. 76 kmph D. 50 kmph</p> <p>iii. 4 men can repair a road in 7 hours. How many men are required to repair the road in 2 hours ? A. 17 men B. 14 men C. 13 men D. 16 men</p> <p>iv. In a certain school, the ratio of boys to girls is 7 : 5. If there are 3600 students in the school, then how many girls are there? A. 2100 B. 1200 C. 1800 D. 1500</p>	4	3 4 3 2	2	12	
b)	<p>i. Find the last digit of the product $7^{23} \times 3^{13}$? A. 6 B. 9 C. 8 D. 2 E. 1</p> <p>ii. The sum of two numbers is 29 and the difference of their squares is 145. The difference between the numbers is— A. 13 B. 5 C. 8 D. 11</p> <p>iii. LCM of two numbers is 2079 and their HCF is 27. If one of the number is 189, the other number is A. 297 B. 584 C. 189 D. 216</p>	3	3 2 3	1	12	

<p>12. a)</p>	<p>i. How many straight lines can be drawn from 18 non-collinear points ? A. 150 B. 136 C. 153 D. 183 E. 170</p> <p>ii. One card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is a face card? A. 3/13 B. 4/13 C. 9/52 D. 1/13</p> <p>iii. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5? A. 1/2 B. 3/5 C. 9/20 D. 8/15</p> <p>iv. A bag contains 6 white and 4 black balls .2 balls are drawn at random. Find the probability that they are of same colour? A. 1/2 B. 7/15 C. 8/15 D. 1/9</p>	<p>4</p>	<p>3</p>	<p>3</p>	<p>12</p>
<p>b)</p>	<p>Study the diagram given below and answer each of the following questions.</p>  <p>  → Persons who takes tea  → Persons who takes coffee  → Persons who takes wine </p> <p>i. How many persons who take tea and wine but not coffee ? A. 20 B. 17 C. 25 D. 15</p> <p>ii. How many persons who take coffee ? A. 100 B. 97 C. 121 D. 115</p> <p>iii. How many persons are there who take both tea and coffee but not wine ? A. 22 B. 17 C. 7 D. 20</p>	<p>3</p>	<p>2</p>	<p>5</p>	<p>12</p>

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level - 1	20%
ii)	Blooms Taxonomy Level - 2	40%
iii)	Blooms Taxonomy Level - 3 & 4	40%
