SNS College of Technology, Coimbatore-35.
(Autonomous)
B.E/B.Tech Internal Assessment -I
Academic Year 2023-2024(Even)
Fourth Semester
19GET276 – VQAR II
(Common to all branches)

B

Time: 1¹ᐟ² Hours   **Maximum Marks: 50**

Answer All Questions

PART - A (20 x 1 = 20 Marks)	
1.	A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?
	a) 40 sec	b) 42 sec
	c) 45 sec	d) 48 sec
2.	A goods train runs at the speed of 72 kmph and crosses a 250 m long platform in 26 seconds. What is the length of the goods train?
	a) 230 m	b) 240 m
	c) 260 m	d) 270 m
3.	A man on tour travels first 160 km at 64 km/hr and the next 160 km at 80 km/hr. The average speed for the first 320 km of the tour is:
	a) 35.55 km/hr	b) 36 km/hr
	c) 71.11 km/hr	d) 71 km/hr
4.	In covering a distance of 30 km, Abhay takes 2 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is:
	a) 5 kmph	b) 6 kmph
	c) 6.25 kmph	d) 7.5 kmph
5.	A train 240 m long passes a pole in 24 seconds. How long will it take to pass a platform 650 m long?
	a) 65 sec	b) 89 sec
	c) 100 sec	d) 150 sec
6.	10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?
	a) 3	b) 7
	c) 5	d) None of these
7.	A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream
	a) 2 hours	b) 3 hours
	c) 4 hours	d) 5 hours
8.	The ratio between the speeds of two trains is 7 : 8. If the second train runs 400 km in 4 hours, then the speed of the first train is:
	a) 70 km/hr	b) 75 km/hr
	c) 84 km/hr	d) 87.5 km/hr

9.	In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is	
	a) 3 km/hr	b) 5 km/hr
	c) 8 km/hr	d) 9 km/hr
10.	A train speeds past a pole in 15 seconds and a platform 100 m long in 25 seconds. Its length is:	
	a) 50 m	b) 150 m
	c) 200 m	d) 250 m
11.	Sakshi can do a piece of work in 20 days. Tanya is 25% more efficient than Sakshi. The number of days taken by Tanya to do the same piece of work is:	
	a) 15	b) 18
	c) 16	d) 25
12.	A boat running downstream covers a distance of 16 km in 2 hours while for covering the same distance upstream, it takes 4 hours. What is the speed of the boat in still water?	
	a) 4 km/hr	b) 6 km/hr
	c) 8 km/hr	d) Data inadequate
13.	A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in:	
	a) 4 days	b) 6 days
	c) 8 days	d) 12 days
14.	Two trains 140 m and 160 m long run at the speed of 60 km/hr and 40 km/hr respectively in opposite directions on parallel tracks. The time (in seconds) which they take to cross each other, is	
	a) 9	b) 9.6
	c) 10	d) 10.8
15.	Twenty women can do a work in sixteen days. Sixteen men can complete the same work in fifteen days. What is the ratio between the capacity of a man and a woman?	
	a) 3 : 4	b) 4 : 3
	c) 5 : 3	d) Data inadequate
16.	Two trains are running in opposite directions with the same speed. If the length of each train is 120 metres and they cross each other in 12 seconds, then the speed of each train (in km/hr) is:	
	a) 10	b) 18
	c) 36	d) 72
17.	In how many ways can the letters of the word 'LEADER' be arranged?	
	a) 72	b) 144
	c) 360	d) 720
18.	In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?	
	a) 159	b) 194
	c) 205	d) 209
19.	In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?	
	a) 266	b) 5040
	c) 11760	d) 86400

20.	In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?	
	a) 32	b) 48
	c) 36	d) 60

	PART - B (15 x 2 = 30 Marks)	
21.	A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is	
	a) 45 km/hr	b) 50 km/hr
	c) 54 km/hr	d) 55 km/hr
22.	An aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours, it must travel at a speed of:	
	a) 300 kmph	b) 360 kmph
	c) 600 kmph	d) 720 kmph
23.	Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:	
	a) 1 : 3	b) 3 : 2
	c) 3 : 4	d) None of these
24.	A and B can together finish a work 30 days. They worked together for 20 days and then B left. After another 20 days, A finished the remaining work. In how many days A alone can finish the work?	
	a) 40	b) 54
	c) 50	d) 60
25.	A jogger running at 9 kmph alongside a railway track in 240 metres ahead of the engine of a 120 metres long train running at 45 kmph in the same direction. In how much time will the train pass the jogger?	
	a) 30 sec	b) 18 sec
	c) 36 sec	d) 72 sec
26.	A can do a piece of work in 4 hours; B and C together can do it in 3 hours, while A and C together can do it in 2 hours. How long will B alone take to do it?	
	a) 8 hours	b) 10 hours
	c) 12 hours	d) 24 hours
27.	Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P,Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?	
	a) 5/11	b) 6/11
	c) 7/11	d) 8/11
28.	A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is	
	a) 2 : 1	b) 3 : 1
	c) 3 : 2	d) 4 : 3
29.	Two pipes can fill a tank in 20 and 24 minutes respectively and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is:	
	a) 60 gallons	b) 100 gallons
	c) 120 gallons	d) 180 gallons

30.	A train 110 metres long is running with a speed of 60 kmph. In what time will it pass a man who is running at 6 kmph in the direction opposite to that in which the train is going?	
	a) 5 sec	b) 6 sec
	c) 7 sec	d) 10 sec
31.	A and B together can do a piece of work in 30 days. A having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole work alone?	
	a) 30 days	b) 40 days
	c) 60 days	d) 70 days
32.	In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?	
	a) 266	b) 5040
	c) 11760	d) 86400
33.	In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?	
	a) 32	b) 48
	c) 36	d) 60
34.	In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?	
	a) 63	b) 90
	c) 126	d) 135
35.	In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?	
	a) 63	b) 90
	c) 126	d) 135