

BSc. (IT) Entrance Test (Sample)

Name:			Roll Number:	
Total Time :- 2 Hour	cs Quest	ions: 100 MCQs	Total Marks :- 200	
	<u>SE</u>	CTION-A		
	MATHEMA	TICS QUESTIC	ONS	
that the ticket drawn h	as a number which is a	multiple of 4 or 7?	lom. Find the probability	
a. 9/25	b. 9/50	c. 18/25	d. None of these	
2. Two dice are tossed a. 7/9	simultaneously. Find the b. 5/12	ne probability that the to c. 1/6	otal is a prime number. d. 5/9	
probability that one bo	y and two girls are pick	ted.	ndomly selected. Find the	
a. 1/50	b. 3/25	c. 21/46	d. 25/122	
4. A dice is rolled twice a. 2/3	b. 1/3	ity of getting sum 9? c. 1/9	d. 3/9	
5. A box has 10 black color?	and 10 white balls. Wh	at is the probability of g	etting two balls of the same	
a. 10/19	b. 9/38	c. 9/19	d. 5/38	
6. Three coins are toss a. 7/8	ed. What is the probabi b. 1/8	lity of getting at most tw c. 2/8	vo tails? d. 4/8	
7. What will be total cost of polishing curved surface of a wooden cylinder at rate of \$ 20 per sq.m, if it has 40 cm diameter and 7m height?				
a. \$ 480	b. \$ 384	c. \$ 352	d. \$ 176	
8. In a class, there are 200 students, at least 140 of students like Maths, at least 150 like Science and at least 160 like English. What is the minimum number of students who like all three subjects?				
a. 50	b. 83	c. 100	d. 150	
Directions for questions 9-11:				
In a music school three	a instruments are tough	t: Tabla Violin and Gui	itar Out of 278 students in	

In a music school, three instruments are taught: Tabla, Violin and Guitar. Out of 278 students in the school, 20 learn Tabla and Violin, 23 learn Violin and Guitar and 21 learn Tabla and Guitar. 9 students learn all three instruments.

It is known that equal number of seats in all three instruments classes. (If a student is learning Guitar as well Tabla, then he occupies two seats: one in Tabla Class and one in Guitar Class)

9. Determine	the number of students	who have occupied only	one seat.
a. 232	b. 200	c. 197	d. 234



10. Determine the number of students who have occupied seats in Violin or Guitar class but not in Tabla Class.						
a. 160	b. 153	c. 175	d. 167			
11. Determine the number of students who have occupied seats in Tabla and Violin Class but not in Guitar Class.						
a. 9	b. 11	c. 13	d. 7			
-		•	utes less than Pipe B to fill e the tank would be full? d. 5/32 minutes			
	N can fill a tank in 22.5 y, after how much time s		tively. If both the pipes are nat the tank is full in 18			
a. 4 minutes	b. 3 minutes	c. 4.5 minutes	d. 2.5 minutes			
minutes. When M alor	ne is filling the tank, it to	akes 9 minutes more tin	pes fill the tank in time X ne than X to fill the tank. In a. What is the value of X? d. 144 minutes			
			urs. Pipe R can empty the time will be needed to make			
a. 28 hours	b. 95 hours	c. 19 hours	d. 14 hours			
16. Two pipes M and N can fill a pool in 40 minutes and 60 minutes, respectively. The entire pool can completely be emptied by another pipe P in 30 minutes. M, N and P are opened alternatively and each is kept open for just 1 minute. In how much time will the pool be filled? a. 180 minutes b. 167 minutes c. 177 minutes d. 165 minutes						
17. The present ages of the ages of Nina and A		and 37 years, respective	vely. What was the ratio of			
a. 3:2	b. 46:25	c. 12:23	d. 8:3			
18. Rohan is as much Meena is 108 years. H		is older than Meena. T	The sum of ages of Ajay and			
a. 32 years	b. 64 years	c. 52 years	d. 36 years			
	amily of 4 members was family same even today	= =	a. Birth of a new child kept oday?			
a. 4 years	b. 1 year	c. 2 years	d. 3 years			
	20. 12 years ago, age of P was 3 times the age of Q. After 12 years, ratio of ages of Q to P will be 2:3. What is the present age of P?					
a. 54 years	b. 36 years	c. 24 years	d. 144 years			
21. Chandan buys some sugar at \$ 15 per kg. He mixes it with sugar having price \$ 18 per kg. The final mixture becomes worth \$ 16 per kg. What is the ratio of quantities of type 1 sugar to type 2 sugar?						
a. 2:1	b. 1:2	c. 5:6	d. 6:5			



filled with a solution of	tely filled and contains of 50% wine and 50% wite of water to wine in t	ater. When both the car	milar can is completely as are emptied in a steel
a. 1:1	b. 1:3	c. 2:1	d. 3:1
honey-water solution is solution that has honey	s added that has honey	to water ratio as 2:1. Ag added to this. After this	n ratio 4:3. To this a 21 litre gain a 51 litre honey-water s 10 litre of the solution is mixture? d. 387:613
32 per litre while Type How much Type-2 aci a. 48 litres		Ramesh sells this acid- no profit no loss transa c. 24 litres	d. 50 litres
			l ratio of water to juice in
a. 8:35	b. 52:25	c. 35:8	d. 25:52
26. The number of nor a. rank of a matrix b. cofactor of the matrix c. reduced echlon form d. conjugate of the matrix d. 27. If A = 0, then A is a. 0	ı trix	n form is called ? c. singular matrix	d. non-singular matrix
28. If A is a symmetric	c matrix, then At =		
a. 0	b. A	c. A	d, diagonal matrix
29. Additive inverse o a. adj A/A	f a matrix A is b. A ²	c. A	d. A
30. Transpose of a colu. Zero matrix	umn matrix is b. diagonal matrix	c. column matrix	d. row matrix
period of both the sum		of interest too was same	ompound interest. The time 4% per annum. At the end, e the sums invested? d. \$ 31250
<u>~</u>	ome money in HDFC at interest if after 2 years, b. \$ 125		
u. ψ 1013	υ, ψ 1 <i>Δυ</i>	υ, ψ 100	u. ψ 150



•	able the amount in 9 years to become four times	years when invested at our itself?	compound in	nterest. In how many	7
a. 13.5 years	b. 27 years	c. 9 years	d. 18	years	
34. When difference per annum, the prince	•	and simple interest for	three years i	s \$ 122 at 5% rate	
a. \$ 24400	b. \$ 14400	c. \$ 18000	d. \$ 1	6000	
35. If at same rate of then what is the prin	•	the simple interest is \$	40 and comp	pound interest is \$ 4	1,
a. \$ 500	b. \$ 400	c. \$ 800	d. \$8	20	
		R is \$ 300, \$ 180 and \$ 6480. How many article c. 20	cles of type (
	=	nd paddy is 2:3 and the e of wheat and paddy. c. 1:1	ratio of qua d. 8:1		a
		s participating in sports boys participating in the c. 251			r
numbers is 36. Find	the numbers.	: 2/3 : 3/4. The differe			st
a. 72, 84, 108	b. 60, 72, 96	c. 72, 84, 96	a. 72,	96, 108	
40. If A:B = 2:3, B:0 a. 18:24:30:35	C = 4:5 and C:D = 6:3 b. 16:24:30:35	7, then A:B:C:D is c. 16:22:30:35	d. 16:	24:15:35	
Differentiate the que $41.4x^3-x^5$	estion 41-47				
a. $12x^2-5x^4$	b. 12x-5x ²	c. x^2-5x^4		d. $12x^2-5x^3$	
42. Sinx(Cosx) a. Sinx.Cosx	bCos(cosx).Sinz	c. Cos(sir	nx).Sinx	dCosx.Sinx	
43. Cos(Log x) a. logx.Sinx b. Si	nx.logx cSin(log	gx).x ⁻¹ dCosx	Sinx. x ⁻¹		
44. Log(Cosx) a. Tanx b. Co	ot x c.	Sinx.Cosx d	Tanx		
45. e ^x Sinx a. e ^x Sinx	b. e ^x Sinx + e ^x Cos.	x ce ^x Sinx	$x + e^x Cosx$	d. e ^x SinxCosx	
$46. \cos x^3$ a. $-3x^2 \cos x^3$	b. $3x^2SInx^3$	c. x ² Cosx ³	d3x	² Sinx	



17	Cocoo	•
4 /	Losec	×

a. Tanx

b. Cos x Sin x

c. -Cosecx (cot x)

d. Cosecx.Cot x

Integrate the question 21-27

48.
$$x^3+2x^3-3x^2$$

a.
$$x^4/4 + x^4/2 - x^3 + C$$

b.
$$x^4/2 + 2x^4 - x^3 + C$$

c.
$$x^4/4 + x^4/2 - x^3 + x + C$$

d.
$$x^4 + 2x^4 - 3x^3 + C$$

49. Cos 3x

a. $\cos x \sin 2x + C$

b. Cos2x.Sinx + C

c. 3^{-1} Sin3x + C

d. -3^{-1} Sin3x + C

50.
$$x^4 - x^5 - x + 5$$

a.
$$x^5/5 - 5x^5 - x^2 + 5x + C$$

b.
$$x^5/5 - x^5/6 - x^2/2 + 5x + C$$

c.
$$x^5/5 - 5x^5 - 2x^2 + 5x + C$$

d.
$$x^5/5 - 5x^5 - 2x^2 + 5x + C$$

51.
$$1/x^5$$

a.
$$4x^{-4} + C$$

b.
$$-4^{-1}x^4 + C$$

c.
$$4/x^4 + C$$

d.
$$-4^{-1}x^{-4} + C$$

a.
$$e^x + C$$

b.
$$Log x + C$$

$$c. x^e + C$$

$$d. Tan x + C$$

53.
$$1/(2x+3)$$

a.
$$2\text{Log } x^{2x+3} + C$$

b.
$$2^{-1}$$
Log $(2x+3) + C$ c. $e^{(2x+3)} + C$

$$e^{(2x+3)} + C$$

d.
$$e^{\text{Log}(2x+3)} + C$$

a.
$$-Cot x + C$$

b.
$$-\operatorname{Sec} x + C$$

c.
$$-Tan x + C$$

d.
$$Cot x + C$$

55. A Number is selected at random from first thirty natural numbers. What is the chance that it is a multiple of either 3 or 13?

- a. 17/30
- b. 2/5
- c. 11/30
- d. 4/15

56. Sunil started a juice (lemon syrup + water) counter. Initially he had 140 liter juice which had 30% water in it. He sold 20 liters of the juice. Then he added equal amount of lemon syrup and water. Now the ratio of water to lemon syrup became 1:2. How much water was added later on?

- a. 9 liters
- b. 12 liters
- c. 14 liters
- d. 20 liters

57. If p(x) = (x+2)(x+k) and if the remainder is 12 when p(x) is divided by x-1, then k equals to b. 3 c. 6 d. 11 a. 2

58. Rohit buys some rice at \$ 10.40 per kg. He mixes it with some rice having price \$ 8.8 per kg. The final mixture becomes 15kg in weight and with total worth \$ 146.40. What is the quantity of rice priced at \$ 8.8 per kg?

- a. 9 kg
- b. 10 kg
- c. 5 kg
- d. 6 kg



- 59. Pipe R can empty a full tank in 30 hours. But two pipes P and Q can fill a tank in 15 hours and 10 hours respectively. Ram unknowingly opened all three taps. After 2 hours Shyam realized it and closed Pipe R. Due to this mistake how much time more would it take to fill the tank?
- a. 18 minutes
- b. 24 minutes
- c. 1 hour 20 minutes
- d. 2 hours 15 minutes
- 60. There is a leak at the bottom of a cistern. Due to this it takes 8 hours to fill the cistern. Had there not been a leak, it would take one hour less to fill the cistern. How much time does it take for the leak to completely empty the cistern?
- a. 48 hours
- b. 55(1/3) hours
- c. 56 hours
- d. 15 hours

SECTION-B

Aptitude Questions

61. In the question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and based on the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Give answer

- (A) If only I follows
- (B) If only II follows
- (C) If either I or II follows
- (D) If neither I nor II follow
- (E) If both I and II follow.

Statement - Recent protests by the mill-workers has led to a lock down. The business cannot remain profitable without cooperation between the owners and mill-workers.

Courses of Action - I. The mill should be closed.

- II. The workers should cooperate with the owners.
- III. The owners should talk with the workers about the problems and try to reach a mutually agreeable solution.
- a. None follow
- b. All follow
- c. Only II and III follow
- d. Neither I nor II follows
- e. Only I and II follow
- 62. In the question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and based on the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Give answer

- (A) If only I follows
- (B) If only II follows
- (C) If either I or II follows
- (D) If neither I nor II follow
- (E) If both I and II follow.

Statement - Increase in the pollution levels in the city by way of automobile exhaustions poses a severe threat to the inhabitants.



Courses of Action - I. All the automobile factories in the city should immediately be closed.

- II. Government should run programs to promote the use of public transport and car-pooling by commuters.
- III. The Government should allow only licensed factories and vehicles.
- a. Only I follows
- b. Only II follows
- c. Only III follows
- d. Both II and III follow
- 63. In the question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and based on the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Give answer

- (A) If only I follows
- (B) If only II follows
- (C) If either I or II follows
- (D) If neither I nor II follow
- (E) If both I and II follow.

Statement - During the recent Diwali season, there was a rise in criminal activities.

Courses of Action - I. The police should immediately investigate into this.

- II. The police should take adequate precautions to avoid thefts during Diwali season.
- III. The known criminals should be arrested before any such season.
- a. Only I follows
- b. Only II follows
- c. Both I and II follow
- d. Neither I nor II follows
- 64. In each of the following questions, choose the correct code form.

In a certain code, MEN is written as ABC and DARK is written as LSTZ. How can READ be written in this code?

a. TCSL

b. TBSL

c. TASL

d. TLSL

65. In a certain code language, 'it be pee' means 'dogs are blue', 'sik hee' means 'large horses' and 'pee mit hee' means 'horses are pigs'.

How is 'pig' written in this code?

a. Hee

b. Pee

c. Sik

d. Mit

66. In a certain code language, 'it be pee' means 'dogs are blue', 'sik hee' means 'large horses' and 'pee mit hee' means 'horses are pigs'.

How is 'pigs are large horses' written in this code?

- a. Mit pee sik hee
- b. Sik it pee be
- c. Cannot be determined
- d. None of these
- 67. In a certain code language, 'it be pee' means 'dogs are blue', 'sik hee' means 'large horses' and 'pee mit hee' means 'horses are pigs'.

How is 'dogs' written in that code?



a. It	b. Be	c. Pee	d. Cannot be determined		
68. In a certain code language, 'it be pee' means 'dogs are blue', 'sik hee' means 'large horses' and 'pee mit hee' means 'horses are pigs'. How is 'large' written in that code?					
a. Hee	b. Sik	c. Pee	d. None of these		
In a code language 'cold tir fit' mean	ge, 'mok dan sil' me		kon dan' means 'wrestler is good	,,	
a. Fit	b. Kon	c. Dan	d. Mok		
70. Choose the oa. Aphid – Paper b. Termite - Woo c. Moth - Wool d. Locust – Plant 71. Choose the oa. Bottle – Wine b. Ball – Bat c. Cup – Tea d. Pitcher – Wate	od dd pair.				
	dd pair of words. g cow d				
73. Choose the o a. Wide - Broad b. Large – Big c. Heavy - Light d. Small - Tiny	dd pair.				
74. Choose the o	dd pair of words				

- 75. Read the following information to answer the given question.
- 1. Rage, Raider, Rattler, Razor, Reaper, Rictor and Rogue are sitting in a circle facing at the centre.
- 2. Reaper is the neighbour Rage and Razor.

b. Albatross – Rookeryc. Coyotes – Bandd. Man – Woman

3. Rogue is not between Rictor and Rattler.



4. Rictor is to the immediate right of Rage.

Which of the following persons are sitting adjacent to each other from left to right in the order shown?

- a. Raider, Rogue, Rattler
- b. Rictor, Raider, Rattler
- c. Rattler, Razor, Rogue
- d. Reaper, Razor, Rogue
- 76. Read the following information to answer the given question.
- 1. Rage, Raider, Rattler, Razor, Reaper, Rictor and Rogue are sitting in a circle facing at the centre.
- 2. Reaper is the neighbour Rage and Razor.
- 3. Rogue is not between Rictor and Rattler.
- 4. Rictor is to the immediate right of Rage.

Who are the neighbors of Raider?

- a. Rictor and Rattler
- b. Rage and Rictor
- c. Rattler and Razor
- d. Data inadequate
- 77. Read the following information to answer the given question.
- 1. Rage, Raider, Rattler, Razor, Reaper, Rictor and Rogue are sitting in a circle facing at the centre.
- 2. Reaper is the neighbour Rage and Razor.
- 3. Rogue is not between Rictor and Rattler.
- 4. Rictor is to the immediate right of Rage.

What is the position of Rattler?

- a. Third to the left of Reaper
- b. To the immediate left of Rage
- c. Second to the right of Rictor
- d. Immediate left of Raider
- 78. Read the following information to answer the given question.
- 1. Rage, Raider, Rattler, Razor, Reaper, Rictor and Rogue are sitting in a circle facing at the centre.
- 2. Reaper is the neighbour Rage and Razor.
- 3. Rogue is not between Rictor and Rattler.
- 4. Rictor is to the immediate right of Rage.

Which of the following pairs has the second person sitting immediately to two places the right of the first?

- a. Rage Raider
- b. Rattler Raider
- c. Reaper Rage
- d. Razor Rogue
- 79. Read the following information to answer the given question.
- 1. Rage, Raider, Rattler, Razor, Reaper, Rictor and Rogue are sitting in a circle facing at the centre.



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 Reaper is the neighb Rogue is not betwee Rictor is to the immediate Raider Rage Rattler Raider Razor Reaper 	n Rictor and Rattler.	to each other?		
d. Rogue Razor				
~ .	nestion, various terms of n by (?). Choose the mi	-		
a. ZYX	b. XYZ	c. WXY	d. YZA	
missing terms as show	nestion, various terms of n by (?). Choose the mi , EMONETIZATIO, Mo	ssing term out of the give	ven alternatives.	
a. NETIZ	b. NETIZAT	c. ETIZAT	d. NETIZA	
	nestion, various terms of n by (?). Choose the mi	-		
a. K	b. L	c. M	d. N	
~ .	nestion, various terms of n by (?). Choose the mi	-		
a. Z	b. X	c. T	d. W	
84. In the following question, various terms of an alphabet series are given with one or more missing terms as shown by (?). Choose the missing term out of the given alternatives. R, U, X, ?, D				
a. Z	b. B	c. A	d. Y	
85. Read the following information to answer the given question. Some boys are sitting in three rows all facing North such that B is in the middle row. C is just to the right of B but in the same row. D is just behind of C while A is in the North of B. In which direction of A is D?				
a. South-East	b. South-West	c. North-West	d. North-East	
86. Read the following information to answer the given question. Goku started from his house towards North direction. After covering 80 km, he turned towards left and covered a distance of 60 km. What is the shortest distance now from his house?				
a. 100 km	b. 110 km	c. 130 km	d. 140 km	

87. Read the following information carefully and answer the question below.



A man walks 10 km toward south and then turns to the right.

After walking 5 km he turns to the left and walks 10 km.

In which direction is he from the starting position?

a. South-East

b. South-West

c. North-West

d. North-East

88. One morning, Manish and Ali were talking to each other face to face at a crossing. If Ali's shadow was exactly to the left of Manish, which direction was Manish facing?

a. East

b. West

c. South

d. North

89. Ravindra Jadeja left home and ran 20 km towards South, then turned right and ran 10 km. He took rest for ten minutes at the same spot and then again turned right and ran 20 km.

After this he turned left and ran 20 km to the cricket ground. How many kilometers will he have to run back to reach his home?

a. 15 km

b. 20 km

c. 25 km

d. 30 km

90. Read the following information carefully and answer the question below.

1. J + K means J is the son of K

2. J - K means J is the wife of K

3. J x K means J is the brother of K

4. $J \div K$ means J is the mother of K

5. J = K means J is the sister of K

What does $A \times B \div C$ mean?

a. A is the brother of C

b. A is the father of C

c. A is the uncle of C

d. A is the nephew of C

91. Read the following information carefully and answer the questions below.

1. J + K means J is the son of K

2. J - K means J is the wife of K

3. J x K means J is the brother of K

4. $J \div K$ means J is the mother of K

5. J = K means J is the sister of K

What does A + B - C mean?

a. C is the father of A

b. C is the uncle of A

c. C is the son of A

d. C is the brother of A

92. Read the following information carefully and answer the questions below.

1. P x Q means P is the father of Q

2. P - Q means P is the sister of Q

3. P + Q means P is the mother of Q

4. $P \div Q$ means P is the brother of Q

Which of the following represents 'R is niece of M'?

a. M - J + R - N

b. $R - M \times T - W$

c. $M - K \times T - R$



d. None of these

- 93. Read the following information carefully and answer the questions below.
- 1. P x Q means P is the father of Q
- 2. P Q means P is the sister of Q
- 3. P + Q means P is the mother of Q
- 4. $P \div Q$ means P is the brother of Q

Which of the following represents 'J is the son of F'?

- a. $J \div R T \times F$
- b. $J + R T \times F$
- c. $J \div M N \times F$
- d. None of these
- 94. Read the following information carefully and answer the questions below.
- 1. P x Q means P is the father of Q
- 2. P Q means P is the sister of Q
- 3. P + Q means P is the mother of Q
- 4. $P \div Q$ means P is the brother of Q

In the expression, $B + D \times M \div N$, how is M related to B?

- a. Son
- b. Grandson
- c. Granddaughter
- d. Daughter
- 95. Read the following information carefully and answer the question below.
- 1. M \$ N means M is the mother of N
- 2. M # N means M is the father of N
- 3. M @ N means M is the husband of N
- 4. M % N means M is the daughter of N

If F @ D % K # H, then how is F related to H?

- a. Brother-in-law
- b. Sister
- c. Sister-in-law
- d. None of these
- 96. How much does a watch gain or lose per day, if its hands coincide every 64 minutes?
- a. Gain 92 min
- b. Lose 9 min
- c. Lose 34 (5/11) min
- d. Lose 32 (8/11) min
- 97. At what time between 7.02 and 8.02 will the hands of a watch be in the straight line but no together?
- a. 5 (3/11) min past 7
- b. 5 (5/11) min past 7
- c. 5 (3/11) min past 7
- d. 43 min past 7



98. At what tina. 43 min past		the hands of a watch point	nt in opposite directions?	,
b. 42 (5/11) m				
c. 49 (1/11) m	*			
d. 50 min past	3			
99. How many a. 11	times do the hands of b. 22	a clock coincide in a day c. 12	7? d. 24	
100. When th	ne time in the clock is 7	.20 pm, then the angle be	etween the hands of the c	lock is
a. 80	b. 90	c. 100	d. 110	

Answer Key

2 d 3 c 4 c 5 c 6 a 7 c 8 a 9 a 10 d 11 b 12 c 13 b 14 a 15 d 16 b 17 c 18 c 19 d 20 b 21 a 22 d 23 d 24 a 25 d 26 a

1 a



- 27 c
- 28 b
- 29 a
- 30 d
- 31 d
- 32 c
- 33 d
- 34 d
- 35 b
- 36 a
- 37 b
- 38 b
- 39 a40 b
- 41 a
- 42 b
- 43 c
- 44 d
- 45 b
- 46 c
- 47 c
- 48 a
- 49 c
- 50 b
- 51 d52 a
- 53 b
- 54 a
- 55 b
- 56 b
- 57 b
- 58 d
- -- -
- 59 b60 c
- 61 c
- 62 d
- --
- 63 c
- 64 b
- 65 d
- 66 a
- 67 d
- 68 b
- 69 a
- 70 a
- 71 b72 d
- 72 d73 c



- 74 d
- 75 b
- 76 a
- 77 c
- 78 a
- 79 c
- 80 b
- 81 d
- 82 a
- 83 d
- 84 c
- 85 a
- 86 a
- 87 b
- 88 d
- 89 d
- 90 c
- 91 a
- 92 a
- 93 d
- 94 b
- 95 a
- 96 d
- 97 b
- 98 c 99 b
- 100 c