BARTI-UPSC-RC-MET-2016

CSAT Answer key with Explanation

Que. No.	Answer	Explanation
1	B	All the information can be tabulated as
2	C	
3	A	

Friend	Department	Organization		
		X	Y	Z
L	Account	✓		
J	Operations		✓	
K	Marketing			✓
T	HR		✓	
R	Research			✓
H	Design	✓		
V	Admin		✓	

Que. No.	Answer	Explanation
4	A	LCM of 2,4,6,8 and 10 is 120 sec. So, they will chime together after every 2 min from the initial time when they chime together. Hence, in 20 min they will chime together at = 20 min/2 min = 10 + 1 (initially) = 11 times
5	C	The total number of possible arrangements are $^5C_3 \times {}^5C_1 + {}^5C_2 \times {}^5C_2 + {}^5C_1 \times {}^5C_3$ = 50 + 100 + 50 = 200
6	C	Both are equally good
7	C	Option (A) suggests that the opposite of what the passage states which is 'savings from renewable energy'. (B) is incorrect as it is irrelevant to message of the passage. (C) summarizes the crux of the passage and the fact that India must take advantage of the scenario. (D) is out of the scope of the passage.

8	C	Let the two numbers be a and b.
		Therefore, a-b=11k…………………(i)
		               a+b=13k…………………(ii)
		               ab=24k…………………..(iii)
		solving (i) and (ii), we get
		a=12k and b=k
		putting the values of a and b in (iii) we get,
		12k * k = 24k
		K=2.
		a=24 and b=2.
		Hence, the required sum=24+2=26

9	C	The runs scored by Virat Kohli in 4's and 6's = (9*4)+(2*6)=48 Therefore, percentage = 86-48/86 * 100 =44.2
10	A	All others follow the given pattern F ----------------E----------------H----------------I

		N----------------M----------------P----------------Q W----------------V----------------Y----------------Z
11	B	1.83
12	B	Terrorism will have to be dealt with actively as it will not go away by itself.
13	B	Let the number be 100x. Then, 50/100 * x+50=x x/2 +50=x x=100 hence, 100% of 100 is 100.
14	B	From statement iii, Mr. Joshi's monthly income = Rs.32,000 + Rs. 16,000 = Rs. 48,000 From statement I and III, Mr. Rawat's income is Rs. 24,000. Hence, statement II can be dispensed with.
15	B	The part of the statement "………use his own power, for the preservation of his life" makes saving his life the central jurisdiction for using his power. There is no compulsion to act freely, as implied by "must" in (A). the focus is on preservation of life itself and not the way of life. Also, the sentence does not justify any and all measures. Hence, option (C) is incorrect. Society has not been compared to nature in the statement, as it has been in (D).
16	B	1
17	B	Option (A) talks about terrorism being inevitable, but makes a link to nuclear weapons which is not a valid assumption. Option (B) is correct as it is mentioned that efforts to curb terrorism are being made around the world in different ways and they all are being performed "continually". Option (C) is wrong because it just assumes that the teaching of nonviolence will address the issue of terrorism as well as war. Option (D) is incorrect since the use of "home and abroad" as well as "around the world" means that it is not just one country that is being discussed, so the assumption of "one country" fixing it's problems is wrong.
18	C	

Person	Badminton	Cricket	Football	Hockey	Tennis
P	✓	✓		✓	
Q		✓	✓	✓	✓
R	✓	✓	✓		✓
S	✓	✓	✓		
T	✓	✓		✓	

Hence R likes badminton, tennis, cricket and football.

19	A	It is the best answer choice because of the word 'may'. Option (B) can be eliminated as Aastha has not blamed only Kung Fu. Her statement may mean that Alpa has become a better teacher because of something else or that she has not become a better teacher. Option (C) and (D) can be eliminated as they are irrelevant.
20	A	It is irrelevant to the given passage. Option (B), (C) and (D) are relevant to the points mentioned in the passage.
21	C	Option (A) is wrong as it is a twisted option. The passage does not talk about India's current credit policy. Option (B) is wrong because the government is now mulling over the option of choosing fiscal deficit range as an option. To say that it has so far been determined will be too extreme. Option (C) is correct as can be inferred from the first and second paragraph. The FFRBM Act is under review. Hence, its objective must be to set

		goals for the government in the field of fiscal deficit. Option (D) is irrelevant to the passage.
22	D	Third from right
23	B	Let the radius and the height of the cylinder be 2x cm and h cm respectively. Volume of the cylinder = Volume of the sphere $\pi * (2x)^2 * h = 4/3\ \pi * (3x)^3$ Therefore, h=9x The required ratio $= \dfrac{2\pi * 2x * (2x+9x)}{4\pi * (3x)^2} - \dfrac{11}{9}$
24	D	Probability that 5 does not appear in first throw but appears in second throw = 5/6 * 1/6 = 5/36 Probability that 5 appears in the first throw but not in the second throw = 1/6 * 5/6 = 5/36 Therefore, required probability = 5/36 + 5/36 = 5/18.
25	C	Let the required number of days be 'n'. Therefore, 150*180=30*180+(n-30)*120 Therefore, n=210
26	C	$^7C_3$
27	C	1.25%
28	D	If I am not bored, then I do not watch TV.
29	B	12.48 hrs.
30	D	The value of money only would be halved.
31	C	65
32	B	Military fills in political vacuum.
33	A	A
34	D	Stastics
35	B	History
36	C	Mathematics
37	C	English
38	A	Economics
39	D	5:3
40	C	10 days
41	D	The last line of the passage clearly suggests that very few people join NSS to do what the objective of NSS is while the others may or may not wish to contribute to the objective of NSS. Their objective of joining NSS is different and hence, people or students should be motivated to join NSS to perform community service. Only then, the real objective of NSS will be fulfilled. So option (D) is the correct answer. The other options are not supported by the passage.
42	B	Required number of ways = $^5C_2 * {}^4C_2 * {}^4C_2$ = 10 * 6 * 6 = 360
43	B	The pattern is as follows : 1st term = $1*2 + 1^2 + 2^2$ 2nd term = $2*3 + 2^2 + 3^2$ 3rd term = $3*4 + 3^2 + 4^2$ 4th term = $4*5 + 4^2 + 5^2$ 5th term = $5*6 + 5^2 + 6^2$ = 91
44	C	Universalization and integration of maternal health and child health services can

		effectively address the problem.
45	D	Can not be predicted
46	C	13
47	B	It is likely that the man's wife was left at home.
48	D	As per the statements given in the passage, options (A) and (B) are not discussed in the passage, so they are not correct. Option (C) is not correct since land conversion will provide enough fund for rurals to purchase it if land is been taken from rurals. Option (D) is a true obstacle because the real challenge is the effective planning which will lead to implement the smart city idea. Hence, the correct option is (D).
49	B	Gaya
50	D	Harshit
51	A	Aakash
52	B	Lucknow
53	D	Showing sum seven : favourable event = {(1,6),(2,5),(3,4),(4,3),(5,2),(6,1)} = 6 At least one number is prime : {(2,5),(3,4),(4,3),(5,2)} = 4 Sample space (Total events) = 36 Ans = 4/36 = 1/9
54	B	E
55	D	The groups can not be compared due to their heterogeneity.
56	A	In the realisation that the government can be brought to book in a Court of Law.
57	B	9
58	C	75
59	D	11
60	B	Monday

61	C	Time taken by first wheel to complete one revolution = 60/60=1 second
		Time taken by second wheel to complete one revolution = 60/36
		       =10/6 second
		Time taken by third wheel to complete one revolution = 60/24
		       =15/6 second
		Required time = L.C.M. of [6/6,10/6,15/6] = 30/6 = 5 second
		Hence, the correct option is C.

62	A	Let income = 100, savings = 100 * 10% = 10 Expenditure = 100-10=90 After 3 years, Income = 100 + 100 * 40% = 140 Savings = 10 + 10 * 10% = 11 Expenditure = 140 – 11 = 129 Required percentage = 129-90/90 * 100 = 39/90 * 100 = 130/3 = 43*1/3%
63	B	Sum of interior angles of polygon = 120+125+130+………. $180(n-2) = n/2\{2*120+(n-1)5\}$ $360n-720 = 240n +5n^2-5n$ $5n^2-125n+720=0$ $n^2-25n+144=0$ $(n-16)*(n-9)=0$ Therefore, n=16 or 9 Hence, the correct option is (B).
64	C	Brown ball = 24kg
65	D	3x=24

66	B	x=8 therefore, black ball = 2x + 3 = 2 * 8 + 3 = 19 kg
67	D	Anshu is facing south west direction.
68	D	Let the angles are a and b $a + b = 180^0$ $a - b = 32$ therefore, $2a = 212$, $a = 106^0$ and $b = 74^0$
69	D	As it is given in the passage that basic facilities provider like teachers and doctors are not willing to stay in the village because of the lack of adequate facilities for them. since the model village includes any kind of basic services such as education, health etc. but the problem is that nobody wants to stay there. hence, the correct option is (D).
70	B	
71	C	
72	D	
73	A	
74	D	F C A B D E
75	C	Ratio = 4 : 7 : 5 After increasing, Ratio = [4 * 115/100] : [7*120/100] : [5*114/100] = 230 : 420 : 285 Value of 285 ratio = 741 Therefore, value of 1 ratio = 741/285 = 2.6 Hence, the value of 230 ratio = 2.6 * 230 = 598
76	A	Thursday
77	A	Some acquisitive readers want to acquire new skills.
78	B	Mukesh

79	A	15 litre includes water = 40%(6 litres) and Alcohol = 60%(9Litres)
		Now, alcohol(50%) = 9 Litres
		Water (50%) = 9 Litres
		Required quantity of water = 9 - 6 = 3 Litres
80	A	1/3