XAT MOCK TEST

Instructions

- I. DO NOT OPEN THE SEAL OF THIS BOOKLET. WAIT FOR THE SIGNAL TO START.
- 2. This booklet contains 40 pages including the blank ones. Immediately after opening the booklet, verify that all pages are printed properly.
- 3. Keep only the Admit Card, pencil eraser and sharpener with you. DO NOT keep with you books, rulers, slide rules, drawing instruments, calculators (including watch calculators), pagers, cellular phones, or any other device. These should be left outside the room.
- 4. This paper has 200 questions. The total time for the test is 120 minutes.
- 5. The paper is divided into three sections.

Section-II: 80 Questions Section-III: 60 Questions Section-III: 60 Questions

- 6. Directions for answering the questions are given in the test booklet before each group of questions to which they apply. Read these directions carefully and answer the questions by darkening the appropriate ovals.
- 7. Wrong answers carry negative marks. There is only one correct answer for each question.
- 8. Do the rough work on the test booklet only and NOT on the answer sheet or any other paper.
- 9. Follow the instructions of the invigilator. Candidates found violating the instructions will be disqualified.
- 10. At the end of the test, remain seated. Do not leave the hall till the invigilator announces, "You may leave now." The invigilator will make the announcement only after collecting the test booklets and answer sheets from everyone in the room.

ANY CANDIDATE GIVING/SEEKING/RECEIVING ASSISTANCE OR FOUND COPYING WILL BE IMMEDIATELY DISQUALIFIED.



Section - I

Direction for questions 1 to 5: Read the following passage and answer the questions that follow with reference to it.

Retailing — no marks for guessing this is the most active and attractive sector of the last decade. While the retailing industry itself has been present through history in our country, it is only the recent past that has witnessed so much dynamism. It's the latest bandwagon that has witnessed hordes of players leaping onto it. While international retail store chains have caught the fancy of many travellers abroad, the action was missing from the Indian business scene, at least till recently.

The emergence of retailing in India has more to do with the increasing purchasing power of buyers, especially post-liberalisation, increase in product variety, and the increasing economies of scale, with the aid of modern supply and distribution management solutions.

A definition of retailing is essential in order to be in a position to assess the impact of retailing and its future potential. The current retailing revolution has been provided an impetus from multiple sources. These 'revolutionaries' include many conventional stores upgrading themselves to modern retailing, companies in competitive environments entering the market directly to ensure exclusive visibility for their products and professional chain stores coming up to meet the need of the manufacturers who do not fall into either of the above categories. Attractiveness, accessibility and affordability seem to be the key offerings of the retailing chain

1.	What, according to the pa. Conventional stores	~	ost attractive sector in th c. Retailing	e last decade? d. None of these
2.	Retailing was present, ba. Charm	out lacked something according b. Profitability	ording to the author. Wha c. Entrepreneurship	at was it? d. Dynamism
3.	What has led to the rise a. Rising population c. Both (a) and (b)	of retailing in India?	b. Increasing volume of d. Increasing buying pov	
4.	What, according to the pa. Attractiveness	passage, does not appear b. Affordability	as a feature of the mode c. Accessibility	ern face of retailing? d. Alacrity
5.	This article seems to be a. taken from a newspap c. a figment of the imagi	er.	b. thought-provoking.d. part of a government v	white paper.
Direct	Direction for questions 6 to 15: Fill in the blanks with one of the choices provided below.			
6.	a business is all all a. Finishing	oout proper decision mak b. Catching	ing. c. Running	d. Laundering

7.	Any business calls for t	wo functions.		
	a. critical	b. rudimentary	c. innate	d. None of these
8.	Buying and selling, they	would say. However, gre	eat businesses anotl	her important function.
	a. comprise	b. consist of	c. collect	d. entail
9.	Establishing relationship critical.	os. Can you or can you n	ot a relation with all	the stakeholders, is what is
	a. propagate	b. motivate	c. cultivate	d. instigate
10.	The best business man	agers that business b. predict	is 90 per cent relations a c. propound	and 10 per cent perspiration. d. None of these
44	There have been many	ingtoness of great business	an ampiron that have becau	a by had management
11.	a. ruined	b. saved	c. created	n by bad management. d. toppled
12.	Dhirubhai Ambani called success.	d his company Reliance,	since Reliance stood for	trust and hence the of
	a. cornerstone	b. pitfall	c. preamble	d. meaning
13.	Trust takes a lifetime to	generate and only one m	nistake to	
	a. forget	b. squander	c. Both (a) and (b)	d. vanish
14.	Incidents like Enron, Arth		om will the people w	ho have lost their money and
	a. chase	b. suffer	c. threaten	d. haunt
15.	Any business is not with	nout a face. It only matter	s whether the face is	or intimidating.
	a. intimate	b. intimating	c. intimation	d. None of these
	ne term of another pair a		• .	ete pair of words or phrases e correct term from the given
16.	Carpenter : Auger :: Sur	geon:		
	a. Stethoscope	b. Blood	c. Scalpel	d. Dosage
17.	Memorandum : Memora a. Strata: Stratum	anda :: b. Insignia : Insigne	c. Alumna : Alumnus	d. Bacillus : Bacilli
18.	: Turpitude :: Cour	rage : Fortitude		
10.	a. Depravity	b. Turbidity	c. Idleness	d. Idiocy
19.	Implicate : Exculpate ::	·		
	a. Magnify	b. Mystify	c. Elucidate	d. Simplify

20.	Malinger: Illness:: Flatter:				
	a. Sneer	b. Exaggeration	c. Appreciation	d. Respect	
21.	Thor : Thunder :: Venus	3:			
	a. Harvest	b. Virginity	c. Love	d. None of these	
22.	Doggerel : Poet ::	_: Novelist			
	a. Caricature	b. Parody	c. Potboiler	d. Tragedy	
23.	Outfox : Cumming :: O	utstrip:			
	a. Thought	b. Speed	c. Bravery	d. Wrath	
24.	Olfactory : Nose ::	_ : Tongue			
	a. Guttoral	b. Gustatory	c. Oral	d. Aural	
25.	Needle Eye : Thread ::	Eyelet :			
	a. Binoculars	b. Kaleidoscope	c. Detergents	d. Shoelace	
Some thinks premi	s of vacuum cleaners as I se of Newspeak, namely ninking to a rude little le: ule. But when left to itseless.	tion, or indeed strive to bri Hoovers or paper tissues to that to control language xicon of politically correct	as Kleenex. And <u>demagoo</u> is to control thought, and t t grunts, just enough for e	e not displeased if the public ques frequently believe in the hey dream of limiting speech efficient exploitation of those edictable, and unfathomable	
26.	Obfuscation a. Confusion	b. Cancellation	c. Uneasiness	d. Constipation	
27.	Demagogue a. Ancient	b. Corpse	c. Manipulator	d. Traitor	
28.	Premise				
	a. Conclusion	b. Inference	c. Assumption	d. Noteworthy	
29.	Lexicon				
	a. Meaning	b. Record	c. List	d. None of these	
30.	Occult				
	a. Cult	b. Concealed	c. Conflict	d. Camaraderie	

Direction for questions 31 to 40: In each of the following questions, choose the word opposite in meaning to given word.

31.	Overt a. Undercover	b. Explicit	c. Secretive	d. Covert
32.	Incorrigible a. Reformable	b. Impossible	c. Irrevocable	d. Inedible
33.	Transparent a. Clear	b. Opaque	c. Large	d. Open
34.	Quotidian a. Serious	b. Expensive	c. Unusual	d. Neutral
35.	Gawky a. Fragrant	b. Melodious	c. Dexterous	d. Interesting
36.	Comely a. Becoming	b. Ugly	c. Pretty	d. Attractive
37.	Infirm a. Weak	b. Deft	c. Potent	d. Strong
38.	Errant a. Vagabond	b. Settled	c. Upright	d. Arrant
39.	Nurture a. Flourish	b. Nervous	c. Heavenly	d. Destroy
40.	Kindle a. Inspire	b. Desire	c. Extinguish	d. Distinguish

Direction for questions 41 to 50: Read the following passage carefully and indicate the meaning of the words or phrases underlined by choosing the correct alternative.

The Karnataka government must be <u>gratified</u> that forest brigand Veerappan did not dictate who should be the state chief minister. Instead, he merely wanted jailed 'LTTE <u>sympathiser</u>' Kolathur T. S. Mani to be freed and made the emissary for securing the release of kidnapped former minister H. Nagappa, the bandit's hostage for over three months. Since Veerappan had threatened to behead Mr Nagappa if Mani was not released before November 30, the government of S. M. Krishna readily capitulated.

Hardly surprising then that the government did not oppose the bail application of Mani, the charges against whom include supplying arms, ammunition, explosives and other material to Veerappan. With the Krishna government only too willing to utilise his services as a negotiator, little <u>credence</u> can be given to law and

parliamentary affairs minister D. B. Chandre Gowda's assertion that the state had no intention of withdrawing the cases against Mani. Having secured conditional bail from one court, Mani, who was nabbed by the Special Task Force last March, is <u>brimming</u> with confidence. He has demanded dropping of the cases against him in exchange for functioning as an <u>emissary</u>.

Even as Karnataka prepares to <u>revoke</u> the charges against Mani, the Tamil Nadu government has said that he will be arrested the moment he steps into the state where he is wanted in five cases, including one relating to the kidnapping of <u>matinee</u> idol Rajkumar. However, the fact that Chennai is helpless should Bangalore send him as an emissary clearly shows that terrorists and criminals, far from being on the run, are being courted by governments.

This is not to suggest that Kolathur Mani should be <u>condemned</u> without a fair trial but to underscore that the Karnataka government, which framed the charges against him, now finds it <u>expedient</u> to drop the cases, making both actions highly suspect. In 2000, the Krishna government's decision to release Veerappan's associates detained under TADA in exchange for Rajkumar's release was halted by the Supreme Court.

In its criticism of the hostage-for-detenus deal, the apex court asked the Krishna administration to quit if it could not govern. If the import of the court's observations made at that time can be disregarded with <u>impunity</u> now, obviously the administration's fear of Veerappan is greater than its respect for the judiciary.

41.	Gratified a. Great	b. Thankless	c. Content	d. Joyous
42.	Sympathiser a. Traitor	b. Ally	c. Relative	d. None of these
43.	Credence a. Acceptance	b. Rigidity	c. Rebuttal	d. Trustworthiness
44.	Brimming a. Scarcity	b. Stolid	c. Fond	d. Awash
45.	Emissary a. Ambassador	b. Spy	c. Tourist	d. Visitor
46.	Revoke a. Provoke	b. Invoke	c. Repeal	d. Retard
47.	Matinee a. Moribund	b. Hostile	c. Unperturbed	d. None of these
48.	Condemned a. Blessed	b. Gorgeous	c. Convicted	d. None of these

49. Expedient

a. Quick b. Practical c. Difficult d. Unbecoming

50. Impunity

a. Delightful b. Exemption c. Alacrity d. Disgusting

Direction for questions 51 to 55: Read the following passage carefully and answer the questions that follow with reference to it.

South Africa is a country blessed with an abundance of natural resources including fertile farmlands and unique mineral resources. South African mines are world leaders in the production of diamonds and gold as well as strategic metals such as platinum. The climate is mild, reportedly resembling the San Francisco bay area weather more than anywhere in the world.

South Africa was colonised by the English and Dutch in the 17th century. English domination of the Dutch descendants (known as Boers or Afrikaners) resulted in the Dutch establishing the new colonies of Orange Free State and Transvaal. The discovery of diamonds in these lands around 1900 resulted in an English invasion, which sparked the Boer War. Following independence from England, an uneasy power sharing between the two groups held sway until the 1940s, when the Afrikaner National Party was able to gain a strong majority. Strategists in the National Party invented apartheid as a means to cement their control over the economic and social system. Initially, aim of the apartheid was to maintain white domination while extending racial separation. Starting in the 1960s, a plan of 'Grand Apartheid' was executed, emphasising territorial separation and police repression.

With the enactment of apartheid laws in 1948, racial discrimination was institutionalised. Race laws touched every aspect of social life, including a prohibition of marriage between non-whites and whites, and the sanctioning of 'white-only' jobs. In 1950, the Population Registration Act required that all South Africans be racially classified into one of three categories: white, black (African), or coloured (of mixed descent). The coloured category included major subgroups of Indians and Asians. Classification into these categories was based on appearance, social acceptance, and descent. For example, a white person was defined as 'in appearance obviously a white person or generally accepted as a white person'. A person could not be considered white if one of his or her parents were non-white. The determination that a person was 'obviously white' would take into account 'his habits, education, and speech and deportment and demeanour'. A black person would be of or accepted as a member of an African tribe or race, and a coloured person is one that is not black or white. The department of home affairs (a government bureau) was responsible for the classification of the citizenry. Non-compliance with the race laws was dealt with harshly. All blacks were required to carry 'pass books' containing fingerprints, photos and information on access to non-black areas.

In 1951, the Bantu Authorities Act established a basis for ethnic government in African reserves, known as 'homelands'. These homelands were independent states to which each African was assigned by the government according to the record of origin (which was frequently inaccurate). All political rights, including voting, held by an African were restricted to the designated homeland. The idea was that they would be citizens of the homeland, losing their citizenship in South Africa and any right of involvement with the South African Parliament, which held complete hegemony over the homelands. From 1976 to 1981, four of these homelands were created, denationalising nine million South Africans. The homeland administrations refused the nominal independence,

maintaining pressure for political rights within the country as a whole. Nevertheless, Africans living in the homelands needed passports to enter South Africa: aliens in their own country.

In 1953, the Public Safety Act and the Criminal Law Amendment Act were passed, which empowered the government to declare stringent states of emergency and increased penalties for protesting against or supporting the repeal of a law. The penalties included fines, imprisonment and whippings. In 1960, a large group of blacks in Sharpeville refused to carry their passes; the government declared a state of emergency. The emergency lasted for 156 days, leaving 69 people dead and 187 people wounded. Wielding the Public Safety Act and the Criminal Law Amendment Act, the white regime had no intention of changing the unjust laws of apartheid.

The penalties imposed on political protest, even non-violent protest, were severe. During the states of emergency that continued intermittently until 1989, anyone could be detained without a hearing by a low-level police official for up to six months. Thousands of individuals died in custody, frequently after gruesome acts of torture. Those who were tried were sentenced to death, banished, or imprisoned for life, like Nelson Mandela.

WIIO V	vere thea were sentences	a to acatri, barnonca,	or imprisoried for ine, in	to reason manacia.	
51.	This passage seems to	be a			
	a. a page from a book of	of history.	b. a newspaper ar	rticle.	
	c. an excerpt from a po	litical treatise.	d. None of these		
52.	What according to the p	passage led to the Bo	oer War?		
	a. Discovery of diamond	ds	b. Colonization		
	c. English invasion		d. None of these		
53.	Which party has been a	accused of introducing	g apartheid in South Afri	ica?	
	a. African National Cong	gress	b. Afrikaner Nation	nal Party	
	c. The Boer Militia		d. Cannot be dete	rmined	
54.	When according to the passage, was apartheid institutionalized?				
	a. 1948	b. 1947	c. 1949	d. 1950	
55.	The Bantu Authorities A	act led to the creation	of		
	a. native homelands.		b. dictatorship.		
	c. ethnic governments is	n homelands	d. None of these		
Direc	tion for questions 56 to	65: Fill in the blanks	with one of the choices	provided below.	
56.	had I put my key	in the lock than the w	atchdog sprang at me.		
	a. Hardly	b. Barely	c. Scarcely	d. No sooner	
57.	Not since 1942 had Ori	ssa a cyclone d	of this magnitude.		
	a. demonstrated	b. witnessed	c. made	d. undergone	
58.	The cyclone, with wind	speeds of around 2	00 kilometres per hour	had uprooted trees, electri	
	poles, brought down ho	uses and blown away	y tinned roofs.		
	a. removed	b. uprooted	c. thrown	d. twisted	

	a. unfair	b. unforgivable	c. unmitigated	d. unchallenged
60.	According to the during this part of the ye	•	e state, the cyclone was	not altogether unexpected
	a. forestry	b. forensic	c. forecasting	d. meteorological
61.		astating cyclone thro	•	argest cities, Behrampur in
	a. ran	b. howled	c. ripped	d. moved
62.	But by the time the cy disaster prediction in the	·	gh, it had already showr	how inadequate the
	a. Short-sightedly	b. pitifully	c. scarcely	d. awesomely
63.	The storm began as a _	on the meteorology i	adar screens.	
	a. warning	b. indicator	c. cloud	d. depression
64. The post-monsoon season routinely such storms at least twice a month.				
	a. brings	b. testifies	c. forecasts	d. witnesses
65.	It was only later that the	e experts finally real	ised that it was going to I	pe a severe cyclonic storm.
	a. political	b. country's	c. international	d. weather

disaster," said chief minister Gamang after visiting the worst-hit areas.

59.

"It has been an

Direction for questions 66 to 75: Read the passage given below and answer the questions that follow.

Performance appraisal has been one of the most debated management practices for several decades. It has generated a wide variety of viewpoints. Here I will concentrate, due to paucity of time and space, on appraisal objectives and its linkages with pay and rewards.

Typically, performance appraisal schemes serve multiple objectives. It is centrally linked to the motivation of employees. It provides some of the essential components of effective motivational strategies; in particular, feedback that permits an employee to learn how well he or she is performing; goal or objective-setting that specifies what the person should be doing; team building that allows the employee to participate along with peers and his superiors in solving problems that impede his productivity; and monetary incentives that reward good performance.

Performance appraisal leads to the identification of the training and development needs of the employees. It also has close links with other important areas of human resource management, in particular with selection, motivation, goal-congruency and succession planning. Performance data provides relevant information required for validating selection methods, in assessing whether selection methods are bringing high performers into the organisation.

Here the organisation must not get trapped into the various pitfalls that come along with administration of appraisal system. The question that arises here is how to avoid these pitfalls? A necessary condition for the



effective management of performance appraisal system in any organisation is the need to clarify and communicate to all concerned the objectives that the system intends to achieve. Everyone in the organisation especially the key decision makers should be fully aware of precisely what objectives the system of performance appraisal is expected to achieve, and the priorities within these objectives.

- 66. What, according to the passage, should be done to make the performance appraisal successful?
 - a. Clearly communicate the objectives of the appraisal process.
 - b. Link the appraisal process with remuneration.
 - c. Use the appraisal simply as a measure of goal congruency.
 - d. None of these
- 67. What, according to the passage, should the key decision-makers be aware of?
 - a. The level of motivation of the employees.
 - b. The objectives the appraisal system is expected to achieve.
 - c. Training and development needs of the employees.
 - d. None of these
- 68. According to the passage, performance appraisal helps to
 - a. motivate employees.

b. determine goal congruency.

c. plan succession.

d. All of these

- 69. What does 'paucity', as used in the context of this passage mean?
 - a. Availability
- b. Opportunity
- c. Scarcity
- d. None of these

- 70. There has been a debate on
 - a. performance appraisal's moral validity.
 - b. cost-benefit analysis of the appraisal process.
 - c. correlation between appraisal and remuneration.
 - d. Cannot say
- 71. According to the author, performance appraisal helps the appraised to
 - a. set goals.

b. improve as a team player.

c. monitor problems that impede productivity.

d. All of the above

- 72. According to the passage,
 - a. appraisal data can provide inputs to validate selection procedures.
 - b. identify non-conformities in business processes.
 - c. Both (a) and (b)
 - d. None of the above
- 73. Performance appraisal, according to the passage
 - a. helps to identify training needs of employees.
 - b. helps to design training and development programmes.
 - c. helps to identify candidates for specific training programmes.
 - d. helps to validate the efficiency of training programmes.

- 74. This article seems to have been taken from
 - a. a student's research paper.
 - b. a newspaper report.
 - c. a business magazine.
 - d. None of the above
- 75. What, according to the passage, is performance appraisal a part of?
 - a. Personnel management
 - b. Human resource management
 - c. Strategic human resource management
 - d. Cannot say

Directions for questions 76 to 80: Select the choice that comes closest to the opposite in meaning to the word given in the question.

76.	Enhance a. Abate	b. Ruin	c. Repeat	d. Philanthropic
77.	Catalyst a. Defeatist	b. Droop	c. Brake	d. Pessimistic
78.	Witless a. Certain	b. Clear	c. Brilliant	d. Definite
79.	Dexterous a. Suave	b. Desperate	c. Awkward	d. Eclectic
80.	Wary a. Imbalanced	b. Ventricle	c. Insane	d. Trusting

Direction for questions 81 to 85: Find out what comes next in the series.

- 81. 0, 11, 26, 45, ____.
 - a. 55
- b. 65
- c. 68
- d. 54

- 82. 1, 1, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{5}{16}$, —.
 - a. $\frac{7}{16}$
- b. $\frac{3}{32}$
- c. $\frac{3}{16}$
- d. None of these

- 83. 5, 9, 15, 19, ____.
 - a. 21
- b. 23
- c. 25
- d. None of these

- 84. 80, 75, 65, 50, ____.
 - a. 30

- b. 70
- c. 45
- d. None of these

- 85. 4, 9, 20, 43, 90, ____.
 - a. 178
- b. 180
- c. 182
- d. 185

Directon for questions 86 to 90: The following questions are related to the construction of words from an alphabet set comprising of three letters: A, B and C. The words are formed by applying one or more of the syntactical rules.

- I. Rule 1: If a word ends with letter A, then a new word can be made by adding B at the end.
- II. Rule 2: If 'x' is any sequence of letters and Cx is a word, then so is Cxx.
- III. Rule 3: If AAA occurs in any word, then we may drop it and replace it by B.
- IV. Rule 4: If BB occurs in any word, then we may drop it.

It is also given that CA is also a word. Given is an illustration of one of the ways of constructing the words CBABBAB from CA in six steps.

- i. CA (given)
- ii. CAA (rule 2)
- iii. CAAAA (rule 2)
- iv. CBA (rule 3)
- v. CBAB (rule 1)
- vi. CBABBAB (rule 2)

Note: A step is defined as an addition of one 'x' or replacement of one set of AAA by one B.

- 86. The minimum number of steps required to construct CBBAA is
 - a. 4

b. 6

c. 5

- d. 3
- 87. The minimum number of steps required to construct BB from CA is
 - a. 4

b. 3

c. 8

- d. Cannot be constructed
- 88. The minimum number of steps required to construct CBBBA is
 - a. 11

b. 8

- c. 10
- d. 12

89. The number of words in the collection {CBB, CAB, CBA, CAA, BC} that can be constructed from CA is

a. 5

b. 4

с. 3

d. 2

90. If CB is also a valid word, then the number of constructible words in the collection in question 89 is a. 5 b. 4 c. 3 d. 2

91. In a meeting there are five participants, A, B, C, D and E, out of which three are gents and two are ladies. How many ways can they sit such that there is at least one lady to the side of each gentleman.

a. 12

b. 36

c. 24

d. 48

Direction for questions 92 to 97: Answer the questions based on the following information.

Function A(x, y) is defined only for non-negative integers.

$$A(x, y) = y + 1 \text{ if } x = 0$$

= $A(x - 1, y) \text{ if } x \neq 0 \text{ but } y = 0$
= $A(x - 1, A(x, y - 1)) \text{ if } x \neq 0 \text{ and } y \neq 0$

92. A(1, 3) = ?

a. 5

b. 4

c. 3

d. None of these

93. A(2, 0) = ?

a. 4

b. 3

c. 2

d. None of these

94. A(1, 2) = ?

a. 3

b. 5

c. 4

d. None of these

95. A(0, A(1, 1)) is the same as

a. A(1, 1)

b. A(0, A(1, 0))

c. A(1, 2)

d. None of these

96. A(0, A(1, 0)) is same as

a. A(1, 1)

b. A(0, A(1, 1))

c. A(1, 2)

d. None of these

97. If A(1, y) = 5, then the value of y is

a. 2

b. 3

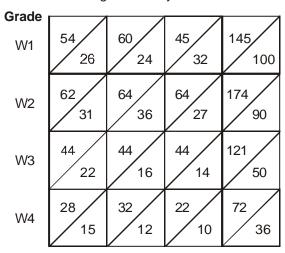
c. 0

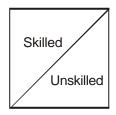
d. None of these

Direction for questions 98 to 107: Answer the questions based on the following information.

A large scale workshop has workers in four grades: W1, W2, W3 and W4, woking in various departments. The table below gives information about three departements: processing, assembly and fabrication. Some workers from processing and fabrication department also work in assembly department. In the assembly department, ratio of workers from (processing department) to (exclusively assembly department) to (fabrication department) is 1:2:1. This ratio is same for all grades and all skill levels.

Department
Processing Assembly Fabrication Total





98. How many skilled workers work in a department other than the three given?

a. 49

- b. 50
- c. 52
- d. 55
- 99. How many unskilled workers are there exclusively in the assembly department?

a. 46

- b. 42
- c. 44

- d. 45
- 100. If 28 more skilled workers are added to W4 grade in assembly department, by how much per cent will the skilled workers in processing department in grade W4 increase? [The same ratios are valid.]

a. 17%

- b. 19%
- c. 20%
- d. 25%
- 101. In the above case, how many skilled workers from fabrication department in W4 grade will also be working in assembly department?

a. 15

b. 12

c. 13

d. 11

102. What is the ratio of the total number of workers of W4 grade working only in processing department to the number of skilled workers of W2 grade working exclusively in assembly department?

a. 2:1

b. 2:3

c. 1:2

d. 1:1

103. By how much per cent do the number of skilled workers from W1 grade working in both processing and assembly departement exceed the corresponding numbers of the unskilled workers from W4 grade?

a. 500%

b. 20%

c. 400%

d. 25%

104.	104. What is the total number of workers working exclusively in assembly department?					
	a. 140	b. 288	c. 200	d.144		
105.	How many unskilled work a. 160	ers from W2 and W3 grade b. 288	es work only in processing c. 68	and fabrication departments?		
	a. 100	0. 200	C. 00	u. 94		
106.	Approximately what per of a. 12%	cent of total employees are b. 8%	e those of W1 grade working c. 10%	ng in fabrication department? d. 11%		
107.	a. Skilled workers of W3b. Skilled workers of W2c. Skilled workers of W2	ring constitutes the higher grade working only in pr grade working only in fa grade working only in pr grade working only in as	ocessing department bricaiton department ocessing department			
108.	Which of the following di	ivides 144 ² + 169 ² + 144 :	× 169?			
	a. 157	b. 144	c. 313	d. None of these		
109.	If $a^{x} = b^{y} = c^{z}$, $\frac{b}{a} = \frac{c}{b}$	and a, b and c are not eq	ual, then what is the value	$e ext{ of } \frac{2z}{x+z}$?		
	a. $\frac{y}{x}$	b. $\frac{x}{y}$	c. $\frac{x}{z}$	d. $\frac{z}{x}$		
Direction for questions 110 to 114: Answer the questions based on the following information. A function $f(a, b)$ is defined for all integers a and b with $a > b \ge 0$ as follows. $f(a, b) = a$, if $b = 0$. $f(a, b) = f(b, r)$ if $b > r$, where r is the remainder when a is divided by b .						
110.	The value of f(27, 18) is a. 6	b. 9	c. 12	d. None of these		
111.	f(6, 4) equals to a. f(54, 52)	b. f(56, 52)	c. f(52, 48)	d. None of these		
112.	The value of f(15, 9) is a. 5	b. 9	c. 1	d. None of these		
113.	f(44, 15) equals a. 4	b. 3	c. 5	d. None of these		
114.	f(9, 3) equals a. f(54, 50)	b. f(54, 51)	c. f(54, 48)	d. None of these		

Direction for questions 115 to 118: Answer the questions based on the following information.

There are three projects and at least one project is to be selected and the following specified certain conditions are given for the selection of these projects.

Condition I: Projects 1 and 2 must be selected.

Condition II: Project 1 or 3 must be selected but both cannot be selected.

Condition III: Project 2 can be selected only if project 3 is selected.

115. Ignoring the conditions I, II and III, how many different ways of selecting projects are there?

a. 6

b. 7

c. 4

d. 8

116. The number of selection combinations which satisfy at most one of the three conditions is

a. 3

b. 2

c. 4

d. 5

117. The number of selection combinations which satisfy at least two conditions is

a. 3

b. 4

c. 5

d. 2

118. The number of selection combinations which satisfy condition 3 is

a. 4

b. 3

c. 5

d. 6

Direction for questions 119 to 125: Given below are some series of numbers or letters. One member of the series is missing form the list marked as '?'. From the alternatives given for each question, select the correct one.

119. 1W 2V 3U 5T ? 13R

a. 11Q

b. 8X

c. 9S

d. 8S

120. HV GT FR EP DN ?

a. EM

b. CW

c. CL

d. CM

121. I M Q ?

a. T

b. W

c. Z

d. U

122. 258 130 66 ? 18 10

a. 34

b. 32

c. 36

d. 40

123. D F I M R ?

a. S

b. X

c. Y

d. V

124. 2 3 4 6 8 ? 16 24

a. 14

b. 11

c. 13

d. 12

125. 2 4 8 14 22 ?

a. 28

b. 34

c. 32

d. 38

Direction for questions 126 to 130: Following questions consist of a number of assertions. Each sentence is an assertion. Some of these assertions may be inconsistent with each other. From these you can form groups of assertions that are consistent with each other. You have to find the largest number of consistent assertions in each case.

126.	Bricks can be used as pillows. Only soft pillows put insomniacs to sleep. Ashok is not an insomniac Bricks are not soft. Ashok sleeps using bricks as pillows. Only insomniacs take sleeping pills. Ashot takes sleeping pills.				
	a. 5	b. 6	c. 4	d. None of these	
127.	•	•	•	create fantasy are creatures a poet. Ram is a creature o	
	a. 4	b. 3	c. 5	d. None of these	
128.				are cooks. Only good cooks a is not a very good cook.	
	a. 6	b. 5	c. 4	d. None of these	
129.	·			poled all the time. Most of the come people cannot be fooled	
	a. 5	b. 4	c. 3	d. None of these	
130.	manager if and only if Y	' is a successful manager		ccessful. X is a successful nager and he is a dishones is an honest manager. d. None of these.	
Five o	different balls (1, 2, 3, 4 a			ng experiment. I, and IV). Each urn may no	
131.	•	n II receives exactly two b		d Name of the co	
	a. 135	b. 27	c. 270	d. None of these	
132.	The number of ways in	which ball 1 goes to urn I	is		
	a. 256	b. 64	c. 320	d. None of these	
133.	The total number of wa a. 625	ys in which the balls can b. 1,024	be distributed in the urns c. 120	is d. None of these	
134.	The number of ways in	which the balls can be di	stributed in the urns, sucl	n that no urn is empty, is	
	a. 120	b. 240	c. 119	d. None of these	

- 135. The number of ways in which the balls can be distributed such that all the balls go into one urn is
 - a. 4

- b. 24
- c. 120
- d. None of these
- 136. In the above set of questions, if the number of balls is changed from five to three and the number of urns is changed from four to three, then in how many ways can the balls be distributed such that only one urn is empty?
 - a. 18
- b. 9

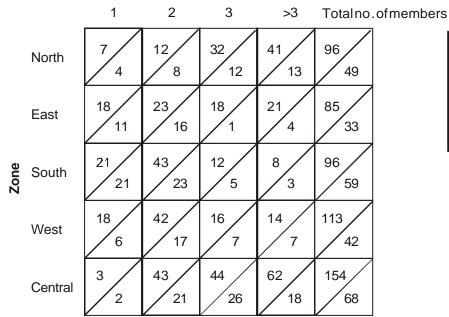
- c. 24
- d. None of these

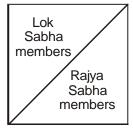
- 137. Complete the following series.
 - 1, 1, 4, 12, 27, 51, ____
 - a. 59
- b. 86
- c. 107
- d. 114
- 138. What is the difference between the smallest and the largest six-digit numbers formed using the digits 0, 1, 2, 3, 4 and 5?
 - a. 440865
- b. 419760
- c. 502343
- d. None of these

Direction for questions 139 and 140: Answer the questions based on the following data.

A survey was conducted by *India Today* to know how our Memebrs of Parliament (MPs) are conscious of the population scenario of the country. The data below summarizes the number of children of the Lok Sabha and the Rajya Sabha members, across different zones of the country.

Number of children





- 139. What per cent of the Rajya Sabha members do not have children at all?
 - a. 8.75%
- b. 11.24%
- c. 11.63%
- d. 10.35%
- 140. What is the average number of children of the Lok Sabha members from the south zone?
 - a. 1

b. 2

c. 3

d. Cannot be determined



Section – III

141. Which of the following Shakespearean plays is parodied in a scene in the Arnold Schwarzenegg Last Action Hero?			Arnold Schwarzenegger flop	
	a. Romeo and Juliet	b. Twelfth Night	c. Hamlet	d. As You Like It
142.	Which of the following ea. Neon	element is lightest and ha b. Helium	s the atomic number 1? c. Oxygen	d. Hydrogen
143.	The 'patella bone' is bet a. The jaw bone	tter known as b. The knee cap	c. The ear lobe	d. The mid nose bone
144.	Walker Cup is associate a. Golf	ed with which of the follow b. Tennis	ving sports disciplines? c. Football	d. Squash
145.	Who wrote the novel <i>Ju</i> a. Arthur C.Clarke	rassic Park on which the b. John Grisham	famous Steven Spielberg c. Michael Crichton	film was based? d. George Hans
146.	Who directed the movie a. Steven Spielberg	es <i>Jaw</i> s and <i>Schindler's Li</i> b. M. Knight Shyamalan		d. Hauz Kahkar
147.	Anand dairy farm is in va. Gujarat	vhich state of India? b. Maharashtra	c. Rajasthan	d. Orissa
148.	Which of the following pa. Murli Manohar Joshi	personality's song features b. V. P. Singh	s in Jagjit Singh's album, c. Indira Nooyi	Samvedna? d. Atal Behari Vajpayee
149.	Justice K.G.Shah Comra. the probe of Godhara c. resolving the BODO	•	up for b. the probe of 1999 Mu d. resolving the POTO ir	
150.	Which of the following p a. Dr Saifuddin Kitchlew c. Lala Lajpat Rai		ng the meeting in Jalianwa b. Mahatma Gandhi d. None of these	ala Bagh on April 13,1919?
151.	Which of the following rea. Akbar	ulers suffered defeat in the b. Aurangzeb	e famous Battle of Haldigl c. Rana Pratap	nati? d. Ibrahim Lodi
152.	'Allen Solly', is a brand a. Madura Coats	owned by which of the fol b. Arvind Mills	lowing group of companie c. Mafatlal	es? d. Raymonds
153.	The controversial MIP-9 a. UTI	95 Mutual Fund scheme be b. ICICI Prudential Life	elongs to c. Om Kotak Mahindra	d. HDFC Standard Life
154.	Which of the following pa. Rahul Bajaj c. N.R. Narayana Murth	personalities would you as	ssociate with Arzoo.com? b. Sabeer Bhatia d. Arun Kumar	
155.	'World Ozone Day', is ca. October 7	elebrated on which of the b. September 16	following days every yea c. November 15	r? d. December 5

156.	In Einstein's famous equation $E = mc^2$, if 'E' stands for energy and 'm' for mass, then what does 'c' stand for?				
	a. Instensity of light	b. Speed of light	c. Einstein's constant	d. Planck's constant	
157.	Which of the following is a. Liver	s the largest gland in the b. Spleen	human body? c. Lungs	d. Bile	
158.	This gentleman is associalking about	ciated with the propagatio	on of the 'Theory of herec	lity' for the first time. We are	
	a. Gregor J. Mendel	b. John Schotky	c. Hargobind Khorana	d. B. Srinivasan	
159.	What was the code nam and their surrogates from		armed force's, operations	s which evicted the Pakistanis	
	a. Operation Vijay	b. Operation Black Hill	c. Operation PAKDEF	d. Operation Victory	
160.	'Camry' is the latest bra a. General Motors	nd of car model from whi b.Toyota Motors	ch of the following auto g c.Maruti Suzuki Ltd.	iant's stable? d. Hyundai	
161.	'Be the first to know', as a. CNN	ssures which of the follow b. BBC World	ving satellite channels? c. Fox News	d. Star News	
162.	The muscial 'West Side a. As You Like It	Story is based on which b. Romeo and Juliet	n of the following Shakesp c. <i>Julius Caesar</i>	pearean plays? d. <i>The Twelfth Night</i>	
163.	What is the nickname of a. Big Ben	of New York city? b. Big Apple	c. City of Dreams	d. Dominique's City	
164.	A closed economy is one which a. does not trade with the other countries b. does not possess any means of international transport c. does not have a coastal line d. is not a member of the United Nations				
165.	The traditional economy a. division of labour and c. capital intensive products	specialisation	b. organisation of produ d. increasing state inter	action for self consumption vention	
166.	Who is the present chie a. Jack Welch	f executive officer of Ge b. Waren Buffett	neral Electric (GE)? c. Jeffery Immelt	d. Samuel J. Palmisano	
167.	Who is the chief execut a. Bill Gates	ive officer of Microsoft? b. Steve Ballmer	c. Steve Wozniak	d. Henry Kruger	
168.	Who is the chief execut a. Samuel J. Palmisand c. Henry Kissinger		b. Phillip Bullock d. Scott Mcneally		
169.	Which of the following of a. Intel	company has the punchlin b. BPL	ne 'We bring good things c. Philips	to life'? d. General Electric	
170.	3001: The Final Odysse a. Arthur C. Clarke	ey' has been authored by b. William Golding	which of the following per	rsonalities? d. Alvin Toffler	

171.	a. Rabat	b. Baku	c. Bishkek	d. Amman
172.	Which river flows througa. Thames	gh the Grand Canyon in th b. Thebes	ne USA? c. Colorado	d. Mississippi
173.	Which of the following t a. Stratford-upon-Avon	owns was the birthplace of b. NewYork	of William Shakespeare? c. Thames City	d. Viverendi City
174.	The only state in India va. Orissa	which has more female po b. Kerala	pulation than male popul c. Maharashtra	ation is d. Nagaland
175.	Which of the following ra. AGNI - I	missiles was test fired suc b. AGNI - II	ccessfully on January 26, c. AGNI - III	2002? d. AGNI - IV
176.	Which of the following to a. Kalhana's <i>Rajataran</i> oc. Udayan's <i>Maitri</i>	oooks is a good source of gini	information on the history b. Kamban's <i>Raslila</i> d. Megasthenes's <i>India</i>	
177.	India's first electric car a. Reva	is known as b. Mewa	c. Bewa	d. Mova
178.	The latest model of Bar a. The President Barbie c. Dolly Barbie	bie doll launched recently	by Mattel Toys is b. Spice Barbie d. Rose Barbie	
179.		to Indian finance minister b. Bent to Pull Lead	Yashwant Sinha? c. Below Poverty Line	d. Below Poor Line
180.	•	I engineering and comput nips and theatres. Who ar b. Amar Bose		oroducts have been used in d. Ajit S. Galgotia
181.	Which of the following a. Copper	elements, after oxygen, is b. Silicon	most abundant on earth	's crust? d. Silver
182.	Albert Einstein was awa a. Discovery of X-rays c. Photoelectric effect	arded the Nobel Prize for	which of his following wor b. Diffraction of light d. Effect of light on the r	
183.	Who created Spiderman a. Stan Lee c. Lee Falk	n?	b. Roger Moore d. Hector Remi Herge	
184.	Which was the only thir a. Love	ng that remained in the Pa b. Life	andora's Box after it was c. Hope	opened? d. Water
185.	Beijing recently won the a. Chicago	e bid to host the 2008 Oly b. Toronto	mpics. Which city achiev c. New Delhi	red the second spot? d. New York
186.	Which are the three desa. Puri, Cuttack, Rourkec. Cuttack, Bhubanesh		as part of the popular Gob. Puri, Konark and Bhud. Konark, Digha, Balas	baneshwar

187.	'Gold Riband', the brand a. Whisky	d owned by McDowell's i b. Beer	s a type of c. Rum	d. None of these
188.	Which of the following is a. Predominance of agr c. Diversity in production		of a modern economy? b. Self-sufficient village d. Static technology	economy
189.	Who is the disinvestme a. Arun Shourie c. Ram Jethmalani	nt minister of India?	b. George Fernandes d. Ghulam Nabi Azad	
190.	The newly appointed ch a. Janaki Ballabha	airman of State Bank of I b. K. V. Kamath	ndia (SBI) is c. P. P. Vora	d. A. K. Purwar
191.	Who is the author of the a. Arundhati Roy	e famous novel <i>Family Ma</i> b. Anita Desai	ntters? c. Rohniton Mistry	d. Salman Rushdie
192.	Who is the present pres a. A.V. Birla	ident of Confederation of b. Ashok Soota	Indian Industry (CII) c. Sanjiv Goenka	d. R.S. Lodha
193.	'It takes the rough with a. TATA Sumo	the smooth' is used by w b. TATA Sierra	hich of the following car r c. TATA Indica	nodels? d. Toyota Qualis
194.	from	_		n Oxana Fedorora. She hails
	a. Greece	b. Panama	c. Venezuela	d. South Africa
195.	Which of the following ra. 141	epresents the number of b. 142	member countries in WTC c. 143	as on January 1, 2002? d. 144
196.	Who was the first Indiar a. Persis Khambata	n film star who advertised b. Lila Chitnis	for Lux soap ? c. Nargis	d. Madhubala
197.	The new chairman of N. a. Phiroz Vandrevala	ASSCOM is b. Pradeep Guha.	c. Arun Netravalli	d. Arun Kumar
198.	'Cannon' is a term asso a. Carom	ociated with which of the b. Billiards	following sports discipline c. Snooker	es? d. Golf
199.	Lifebuoy soap is brand a. Godrej	of which of the following of b. P&G	companies? c. HLL	d. None of these
200.	Light year is a unit of a. distance	b. time	c. speed	d. velocity

XAT - Mock

Answers & Explanations

1	С	2	d	3	d	4	d	5	а	6	С	7	а	8	d	9	С	10	С
11	а	12	а	13	b	14	d	15	а	16	С	17	d	18	а	19	d	20	С
21	С	22	С	23	b	24	b	25	d	26	а	27	С	28	С	29	d	30	b
31	d	32	а	33	b	34	С	35	С	36	b	37	d	38	b	39	d	40	С
41	С	42	b	43	а	44	d	45	а	46	С	47	d	48	С	49	b	50	b
51	С	52	C	53	b	54	а	55	С	56	d	57	b	58	d	59	С	60	d
61	С	62	b	63	d	64	а	65	d	66	а	67	b	68	d	69	С	70	d
71	d	72	а	73	а	74	С	75	b	76	а	77	С	78	C	79	С	80	d
81	С	82	С	83	С	84	а	85	d	86	b	87	d	88	а	89	С	90	b
91	b	92	b	93	d	94	а	95	С	96	а	97	d	98	а	99	С	100	d
101	а	102	d	103	С	104	d	105	С	106	С	107	b	108	а	109	а	110	b
111	а	112	d	113	d	114	b	115	b	116	b	117	С	118	C	119	d	120	С
121	d	122	а	123	b	124	d	125	С	126	d	127	а	128	d	129	С	130	d
131	С	132	а	133	b	134	b	135	а	136	а	137	b	138	а	139	d	140	d
141	b	142	d	143	b	144	а	145	С	146	а	147	а	148	d	149	а	150	d
151	С	152	а	153	а	154	b	155	b	156	b	157	а	158	а	159	а	160	b
161	а	162	b	163	b	164	а	165	а	166	С	167	b	168	а	169	d	170	а
171	а	172	С	173	а	174	b	175	а	176	а	177	а	178	а	179	С	180	b
181	b	182	С	183	а	184	С	185	b	186	b	187	а	188	С	189	а	190	d
191	С	192	b	193	b	194	b	195	d	196	b	197	d	198	b	199	С	200	а

Scoring table

Total questions	Total attempted	Total correct	Total wrong	Score	Time taken
200					

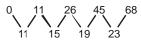
- 1. Refer to the 1st line.
- Refer to the 2nd sentence.
- 3. Refer to the paragraph 2.
- Refer to the last line.
- 5. A newspaper feature is the most likely option.
- 6. 'Running' is most akin to 'managing'.
- The functions here have to be critical otherwise the business fails.
- 8. 'Entail' here means 'necessitate'.
- 9. 'Cultivate' means 'to nurture'.
- 10. 'Propound' means 'to suggest'.
- 'Saved' and 'created' will not fit with 'bad management'.
 'Toppled' also won't fit as we are not talking about governments here.
- 12. 'Cornerstone' means a basic part.
- 13. 'Squander' means to 'throw away'.
- 'Incidents' cannot 'suffer' or 'chase'. 'Threaten' is also an unlikely choice.
- 15. We look for an opposite word to 'intimidate'.
- The first word in the word pair is the profession and the second word is the tool.
- 17. The singular-plural pair.
- 18. The second word in the pair is a characteristic of the first word in the pair.
- 19. 'Implicate' is an antonym of 'exculpate', 'complicate' is an antonym of 'simplify'.
- Malinger is to feign illness just as flattery is to appreciate in an insincere manner.
- 21. 'Thor' is the 'God of Thunder' as 'Venus' is the 'God of
- Doggerel is poor or trivial poetry as a potboiler is pulp fiction.
- 23. You need cunning to outfox someone and you need speed to outstrip someone.
- 24. Olfactory pertains to the sense of smell (nose), whereas gustatory pertains to the sense of taste (tongue).
- A thread is inserted in the needle eye. Similarly a shoelace is inserted in an eyelet.
- 26. To obfuscate means to confuse.

- 27. A demagogue is a person who wins people's support by manipulating them by appealing to their emotions or baser instincts rather than their reason.
- 28. A premise here means an assumption.
- 29. A lexicon is the politician's glossary of terms or dictionary.
- Occult here means mysterious, beyond the range of ordinary knowledge and hence concealed.
- 31. Overt means to be open about something and covert means to be secretive.
- 32. Incorrigible means someone who cannot be corrected and changed but reformable means someone who can be reformed and changed.
- 33. Transparent and opaque are clear antonyms.
- Quotidian means commonplace daily or usual. So the opposite is unusual.
- A gawky person is awkward. A dexterous person is skilful.
- 36. A comely person is attractive.
- 37. An infirm person is weak.
- 38. An errant person is wayward.
- 39. Nurture and destroy are antonyms.
- 40. To kindle is to ignite a fire.
- 41. Gratified here means thankful, and hence pleased or content.
- 42. A sympathizer is a person who subscribes to the views of the LTTE and is hence an ally.
- 43. Credence here means to give weightage or believability to Gowda's assertion.
- 44. Brimming means to be full of something.
- 45. An emissary is an envoy.
- 46. To revoke means to cancel a law.
- 47. Matinee refers to the movies, specifically to an afternoon show.
- 48. Condemned means convicted or punished.
- 49. 'Expedient' means 'convenient' or practical rather than based on principles or moral grounds.
- 50. Impunity means to be free or exempt from blame.
- 51. The passage is from a political essay or a thesis.
- 52. Refer to paragraph 2.

- 53. Refer to paragraph 2.
- 54. Refer to paragraph 3.
- 55. Refer to paragraph 4.
- 'Hardly/Scarcely/Barely' are ungrammatical with 'than'. 56.
- 57. 'Demonstrated', 'made' and 'undergone' do not fit in the sentence at all.
- A pole can be bent or twisted, not 'removed', or 'thrown' 58. or 'uprooted' by a cyclone.
- 'Unmitigated' means that the disaster was complete, 59. nothing or no one was spared.
- 60. The meteorological department does weather forecasting.
- 'Ripped through' means that the cyclone tore the city 61. apart, leaving a trail of destruction.
- 'Pitifully' means that the disaster prediction system was 62. woefully inadequate.
- 63. A depression is a mass of air that has a low pressure and that often causes rain.
- 64. The season brings storms or showers.
- 65. The weather experts can realize the development.
- 66. Refer to the last paragraph.
- 67. Refer to the last paragraph.
- 68. Refer to paragraph 3.
- 'Paucity' in paragraph 1 talks of lack of time and space 69. for writing this article.
- 70. Refer to paragraph 1.
- 71. All the options have been mentioned.
- 72. Refer to paragraph 3.
- 73. Refer to paragraph 3.
- 74. A research paper would not have 'paucity of time and space' while an article would.
- 75. Refer to paragraph 3.
- 76. Enhance is to increase, whereas abate is to decrease in intensity or the like.
- 77. Catalyst tends to speed up things, whereas a brake tends to reduce speed.
- 78. Witless is foolish and hence the opposite of brilliant.
- 79. Dexterous is skillful, and not awkward.

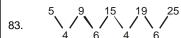
80. Wary is cautious, careful (because suspicious) and the opposite of trusting.

81.

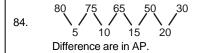


Difference of consecutive terms are in AP.

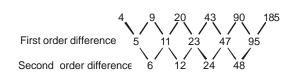
 $\frac{2}{2}, \frac{4}{4}, \frac{6}{8}, \frac{8}{16}, \frac{10}{32}, \frac{12}{64}$ 82.



With alternate difference of 4 and 6 respectively.



85.



- 86. 1. CA
 - 2. CAA
 - 3. CAAAA
 - 4. CAAAAAAAA
 - 5. CBAAAAA
 - 6. CBBAA
- 87. It is never possible to make C disappear completely. So BB cannot be constructed.
- 88. 1. CA
 - 2. CAA
 - 3. CAAAA
 - 4. CAAAAAAA
 - 5.CAAAAAAAAAAAAAA
 - 6. CBAAAAAAAAAAAA
 - 7. CBBAAAAAAAAA
 - 8. CBBBAAAAAA
 - 9. CBBBBAAAA
 - 10. CBBBBBA (Rule 3)
 - 11. CBBBA (Rule 4)
- 29 The words that can be formed are:

CAA (Rule 2)

 $CBA (CAA \rightarrow CAAAA \rightarrow CBA)$

CAB (CA → CAB)

90. The valid words possible are:

CBB (Rule 2)

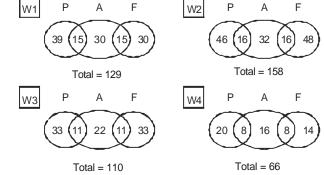
CAB (As we take CA from question 9)

CBA

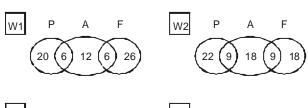
CAA

- 91. There are three possible ways of arranging the given condition.
- (i) Gents L Gents L Gents So $3! \times 2 = 12$ ways.
- (ii) Gents L Gents Gents L 3! x 2 = 12 ways. Total = 12 + 12 = 24 ways.
- (iii) The mirror image of the arrangement of (ii), i.e. L Gents Gents L Gents. these are 12 ways. So total 12 + 12 + 12 = 36
- 92. $\begin{array}{ll} A(1,3) = A(0,A(1,2)) \\ A(1,2) = A(0,A(1,1)) \\ A(1,1) = A(0,A(1,0)) \\ A(1,0) = A(0,0) = 1 \\ \text{Re substituting, } A(1,1) = A(0,1) = 2 \\ A(1,2) = A(0,2) = 3 \\ A(1,3) = A(0,3) = 4 \end{array}$
- 93. A(2, 0) = A(1, 0) = A(0, 0) = 0 + 1 = 1
- 94. A(1, 2) = 3, as seen in solution of Q. No. 92.
- 95. A(1, 2) = A(0, A(1, 1)) by definition.
- 96. A(1, 1) = A(0, A(1, 0)) [By using the third condition of the function definition]
- 97. A(1, y) = A(0, y) = y + 1 = 5, so y = 4.

Questions 98 to 107: Skilled:



Unskilled:



- 98. Number of skilled workers in other departments = [145 + 174 + 121 + 72] [129 + 158 + 110 + 66] = 49
- 99. Number of unskilled workers in assembly = 12 + 18 + 8 + 6 = 44
- 100. The number of people in the processing department would increase by $\frac{1}{4} \times 28 = 7$ Hence, increase in W4 grade skilled workers is $\frac{7}{28} \times 100 = 25\%$.
- 101. The final intersection of fabrication and assembly department = 8 + 7 = 15
- 102. From the set representation we have the required ratio is (12 + 20): $32 \Rightarrow 1$: 1.
- 103. Skilled from W1 = 15 Unskilled from W4 = 3 Hence, the skilled in W1 exceed the unskilled from W4 by 400%.
- 104. Use the set representation answer is [30 + 32 + 22 + 16 + 12 + 18 + 8 + 6] = 144
- 105. Use the set representation answer is = (22 + 18) + (18 + 10) = 68
- 106. Use the set representation
 Total number of employees
 = [145+174+121+72] + [100+90+50+36]
 = 512+276=788
 Number of workers of grade W1 in fabrication department = 35+32=77
 Approximate percentage = 10%.
- 107. Compare using the sets, we get the answer as (b).
- 108. $144^{2} + 169^{2} + (144 \times 169)$ $12^{4} + 13^{4} + (12^{2} \times 13^{2})$ $= \{12^{2} + (12 \times 13) + 13^{2}\}\{12^{2} (12 \times 13) + 13^{2}\}$ $= 469 \times 157$ This is as per the formula $a^{4} + b^{4} + a^{2}b^{2} = (a^{2} + ab + b^{2})(a^{2} ab + b^{2}).$
- 109. Let us assume

$$a^{x} = b^{y} = c^{z} = \alpha$$

 $\therefore a = \alpha^{1/x}, b = \alpha^{1/y} \text{ and } c = \alpha^{1/z}$

So
$$\frac{b}{a} = \frac{c}{b}$$

$$\Rightarrow \frac{1}{x^{2}} = \frac{1}{x^{2}} = \frac{1}{y}$$

$$\Rightarrow \frac{1}{y} - \frac{1}{x} = \frac{1}{z} - \frac{1}{y}$$

$$\Rightarrow \frac{x+z}{xz} = \frac{2}{y} \Rightarrow \frac{2z}{x+z} = \frac{y}{x}$$

110.
$$f(27, 28) = f(18, 9) = (9, 0) = 9$$

111.
$$f(6, 4) = f(4, 2) = f(2, 0) = 2$$

 $f(54, 52) = f(52, 2) = f(2, 0) = 2$

112.
$$f(15, 9) = f(9, 6) = f(6, 3) = f(3, 0) = 3$$

113.
$$f(44, 15) = f(15, 14) = f(14, 1) = f(1, 0) = 1$$

114.
$$f(9, 3) = f(3, 0) = 3 = f(51, 3) = f(3, 0) = 3$$

115. {2³-1}
 Every project has two ways, either selection or rejection.
 So total number of ways are 2 x 2 x 2 = 8.
 Subtracting one way (the case of all getting rejected), we have 8 - 1 = 7 ways.

116. Two selections, i.e. (1, 3) and (2) meet at most one condition.

117. All the remaining 5 ways other than the possibilities in Q. 116, i.e. (1, 2, 3), (1, 2), (2, 3), (1), (3).

118. The projects are (2, 3), (1, 2, 3), (1, 3), (1) and (3).

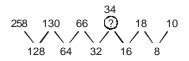
119. The digit is changing as in Fibonacci series
1, 1 + 1 = 2, 2 + 1 = 3, 3 + 2 = 5, 5 + 3 = 8, 8 + 5 = 13
and letters attached are in decreasing order,
i.e. W, V, U, T, S, R
∴ 8S

First letter is in decreasing sequence
 H G F E D C
 V T R P N L
 Second letter is in alternate decreasing series.

121. Two consecutive letters have a difference of three letters between them.

I <u>JKL</u> M <u>NOP</u> Q <u>RST</u> U

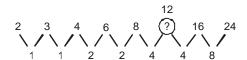
122.



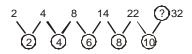
123. Between two consecutive letters the number of letters are in AP.

 $\underline{\mathsf{D}}\;\mathsf{E}\;\underline{\mathsf{F}}\;\mathsf{G}\;\mathsf{H}\;\underline{\mathsf{I}}\;\mathsf{J}\;\mathsf{K}\;\mathsf{L}\;\underline{\mathsf{M}}\;\mathsf{N}\;\mathsf{O}\;\mathsf{P}\;\mathsf{Q}\;\underline{\mathsf{R}}\;\mathsf{S}\;\mathsf{T}\;\mathsf{U}\;\mathsf{V}\;\mathsf{W}\;\underline{\mathsf{X}}$

124.



125.



126. No three statements are consistent.

127. All poets are creatures of fantasy. Ram is a poet. Ram is a creature of fantasy. Those who are creatures of fantasy can create fantasy.

128. None of the given answer choices are applicable, though independently, two assertions can be consistent to one another.

129. First three assertions are logically consistent. The fourth and the fifth ones are not. Converting to the assertions to a set of five, we have the following. Assertion Example

1. \rightarrow Some A are B and some A are not B.

2. \rightarrow Some A are not B. (Some A are B.)

3. \rightarrow Some A are B.

4. \rightarrow All A are C.

5. \rightarrow Some A are D.

From the above analogues example, we can see that 1, 2 and 3 are consistent while 4 and 5 are not linked to the first three.

130. 'Unsuccessful' and 'dishonest' are not linked. Similarly, honest is linked neither with unsuccessful nor successful. So none of the answer choices a, b, c fits in.

131. Two balls out of five balls can be selected in 5C_2 ways = 10 ways.

Remaining three different balls can be distributed in three different boxes in 3^3 , i.e. = 27 ways.

So total number of ways = $27 \times 10 = 270$.

132. After putting ball 1 in urn I, the remaining four balls can be distributed in four urns, in 4⁴ ways = 256.

133. Every ball can be put in four ways. It can go to any of the four urns. This means for each ball, there are four ways.

.. Total ways = $4 \times 4 \times 4 \times 4 \times 4 = 4^5 = 1024$ ways.

134. The only possible way of distributing all five balls into four urns is that one urn has two balls and other three have one-one ball each. Two balls out of 5 can be selected in 5C_2 ways. These 2, 1, 1, 1 can be distributed into 4 urns in 4! ways.

Total ways = $4! \times {}^5C_2 = 240$ ways.

135. All balls can go to any of the four urns.∴ Four ways.

136. Two out of three urns can be selected in ³C₂ ways. Both urns should be filled. So there is only one way of dividing the balls into two groups (2 balls and 1 ball); two balls can be selected in ³C₂ ways and can be distributed in two ways.

 \therefore Total ways of distribution = ${}^{3}C_{2} \times {}^{3}C_{2} \times 2 = 18$ ways

137. The series increases by addition of
$$(x^2 - 1)$$
 to the previous number, where $x = 1, 2, 3, ...$

$$1 + (1^2 - 1) = 1$$

$$1 + (2^2 - 1) = 4$$

$$4 + (3^2 - 1) = 12$$

$$12 + (4^2 - 1) = 27$$

$$27 + (5^2 - 1) = 51$$

$$51 + (6^2 - 1) = 86$$

$$4 + (3^2 - 1) = 4$$

 $4 + (3^2 - 1) = 12$

$$12 + (4^2 - 1) = 27$$

$$27 + (5^2 - 1) = 51$$

$$51 + (6^2 - 1) = 86$$

139.
$$12(N) + 1(E) + 7(S) + 5(W) + 1(C) = 26$$

$$\frac{26}{251}$$
 = 10.35%

140. Number of members having more than three children is not known.