

STRUCTURE OF JMET 2006 AND SAMPLE TEST QUESTIONS

Test Structure

The JMET 2006 will be of 2 hours duration. The test will consist of 150 questions (objective / multiple choice type) in the following sections:

1. Verbal Communication
2. Logical Reasoning
3. Quantitative Ability
4. Data Interpretation

There is negative marking for incorrect answers. For a wrong answer to a question, 25% of the marks allotted to that question will be deducted.

General instructions

1. You should be in your assigned seat at the Test Center latest by 1000 hrs.
2. You should bring the following to the Test Center:
 - i) Your Test Admit Card, without which you will not be allowed to take the test.
 - ii) Pen/ball pen, HB Pencil(s), eraser(s) and sharpener(s).**Calculators, electronic diaries, cell phones and similar electronic gadgets will not be allowed in the examination hall.**
3. The test begins with the distribution of the Test Booklets. When you get the Test Booklet, make sure that the Booklet is in sealed condition. If the seal is found broken or tampered with, please bring this matter immediately to the notice of the invigilator.
4. Do not break the seal of the Test Booklet till you are told to do so.
5. Without breaking the seal, take out the Answer Sheet from the Test Booklet and verify that it has the same code printed on it in large letters as on the cover of the Test Booklet. If the two codes do not match, or the Test Booklet does not contain the Answer Sheet, the Test Booklet must be exchanged immediately with a new sealed Test Booklet. The candidate must not mark the answers on an Answer Sheet having a code different from the code printed on the Test Booklet.
6. Fill in all the information required in the right hand side of the Answer Sheet and sign where indicated using pen/ball pen. Use HB pencil for darkening the oval bubbles corresponding to your Registration Number on the Answer Sheet. Use extreme caution in filling the appropriate bubbles. Information on the right half of the Answer Sheet should be written in ink wherever indicated. No distinctive mark of any sort is to be put anywhere on the Answer Sheet.
7. Open the seal of the Test Booklet only after having been instructed to do so by the invigilator. Each section contains several items / questions. You should read the directions for each section of the test carefully.
8. The left hand side of the Answer Sheet must be filled in with HB pencil only. The answers to the questions are to be marked by darkening the bubbles corresponding to the letters A, B, C or D. A soft eraser should be used for erasing any darkened bubble if required.
9. Nothing should be written either in ink or in pencil, in the space used for printing the Barcode on the Answer Sheet. If the candidate tampers with the Barcode, he/she will be disqualified.
10. All the rough work should be done only on the blank pages of the Test Booklet. No extra papers will be provided.
11. Once the test starts, you will not be allowed to leave the examination hall for any reason till the test is over and all other formalities are completed.
12. You should remain seated after completing the test. The invigilator will collect the Answer Sheet. You will be allowed to leave the hall only after the Answer Sheets from all the candidates in your hall have been collected, and accounted for.

Candidates found violating the instructions of the Test / Invigilator, will be disqualified. Any candidate giving assistance or seeking / receiving help from any source in answering questions or copying in any manner in the test will forfeit his/ her chance of being considered for admission.

Note: *In all matters concerning JMET 2006, the decision of the Institutes will be final and binding on the applicant.*

The test requires knowledge of basic mathematics (arithmetic, algebra, matrices, trigonometry, mensuration, plane and co-ordinate geometry, calculus, set theory, probability and statistics etc.) and English.

Sample questions for each of the four sections are provided below. Note that these are only indicative of the *type* of questions that can be expected in the test.

Section 1: Verbal Communication

Q. 1: In the paragraph below, each line numbered 1 to 4 has one wrong word. Locate the wrong word. Then, identify which response option (A, B, C, or D), given below, has the correct combination of words that would make the paragraph read correctly.

1. At times our respirations seem more than wishful dreams. With a
2. sluggish global economy, slumping housing valuables, a tight
3. job market and rising costs for essentials such as healthy care and
4. tuition, achieving financial prosperity appears even more remotely.

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|----|------------------|--------------|-----------------|----------------|
| A. | 1. perspiration. | 2. ticklish. | 3. rousing. | 4. appeals. |
| B. | 1. bashful. | 2. dumping. | 3. essentially. | 4. prosperous. |
| C. | 1. aspirations. | 2. values. | 3. health. | 4. remote. |
| D. | 1. timely. | 2. tightly. | 3. carefully. | 4. finance. |

Q. 2: In these questions, each sentence has four underlined words or phrases marked A, B, C, and D. Choose the one that must be changed to make the sentence correct.

1. Promotion by senior (A) / is the next pillar (B) / of the system (C) / we shall look at (D).
2. When making a tender, a contractor must make allowances (A) / in his quoted price for possible increased costs (B) / , but it is not far from easy (C) / to calculate how great these will be. (D)
3. One topic of conversation almost guaranteed (A) / to rise the blood pressure (B) / of a European industrialist (C) / is that of economic democracy (D).

Q. 3: Choose the word/phrase nearest in meaning to the underlined part from the four alternatives given under each of these questions:

1. He collapsed following a vigorous exercise session at the gym.
(A) Died. (B) Relaxed. (C) Fainted. (D) Gaspd.
2. The old woman next door is a garrulous person
(A) Senile. (B) Sociable. (C) Talkative. (D) Haggard.

Q. 4: The following extract has been taken from a letter written by an insurance company to one of its customers. Fill in the blanks in this extract with the most appropriate words.

We wish to inform you 1. _____ the premium for this policy 2. _____ not been paid as on the due date. 3. _____ the policy is revived the benefits attached to it 4. _____ stand modified.

1. (A) which. (B) about. (C) that. (D) of.
2. (A) could. (B) has. (C) have. (D) can.
3. (A) If. (B) Because. (C) Unless. (D) Before.
4. (A) shall. (B) would. (C) could. (D) be.

Q. 5: Answer the following questions based on your reading of the given passage.

At the center of studies of the mind is the problem of representation. It has always seemed that if we could unravel the mystery of how knowledge is stored it would lead irrevocably to understanding how it is learned, how it is used, and, perhaps most intractably of all, how it is made conscious. The form that language takes

when it is laid down as traces of long-term memory is a key to understanding its role in human development, intelligence, and socialization.

How is language represented? Are semantic features of words stored as entries in a lexicon or as part of our knowledge of concepts? How do words and meanings combine so that we can use language meaningfully and express thoughts verbally? Why do contexts change the way we interpret language? These are some of the questions that have fueled the inquiry into psycholinguistic processes and each one has a noble tradition in research and theory. Because the questions are difficult and the solutions impossible to observe directly, the research is intricate and the conclusions are inferential. However, the vast majority of that literature is based on a simplifying assumption: people have only one language. Again the story becomes more complex when these questions are asked about speakers who have two or more languages.

There is another complicating factor. Psycholinguistic research has typically approached research questions by examining and attempting to understand the stable state, namely, the adult mind. Development processes are always more difficult to observe and to understand. For monolinguals, questions about how children build up representations for language and representations for concepts are notoriously difficult to untangle. Children's early words and early meanings have a tentative existence on their own, as well as precarious connections to each other. These fragile systems must somehow evolve into the fabric that is our knowledge of language and the world. The mechanisms by which this happens and the stages through which it progresses are the subject of much research in developmental psycholinguistics. Again, the escalation in complexity is palpable if children are learning two languages.

These are the problems faced in the attempt to understand how bilingual children construct mental representations for language and concepts. Investigating this issue includes two sets of related questions that can nonetheless be examined separately. The first set of questions concerns the relation between the two languages. How is the mental organization of two languages different from that of one? What is the relation between the languages in the child's representational structure? Are the various levels of language, such as phonology, syntax, semantics, and pragmatics, isolated with the child's knowledge of an individual language or part of a shared resource? The second set of questions concerns the role of meaning and concepts in linguistic organization. How does each language connect with a system of meaning? Are the two languages alternative labeling systems for the same concepts? Does each language identify a different set of concepts and experiences for children? These are the questions that underlie the study of the development of mental representation for bilingual children.

i) **The Central idea of the passage is that:**

- a) To understand the human mind it is important to study how language is represented.
- b) It is difficult to conduct a study on speakers who use two or more languages.
- c) It is difficult to understand how monolinguals store language.
- d) Bilinguals are more intelligent than monolinguals.

ii) **Which of the following statements is not true?**

- a) All researchers assume that people speak only one language.
- b) Contexts can influence our interpretation of language.
- c) Words are stored in the mind.
- d) People do not know how words are stored in the mind.

Choose the most appropriate answer for the next three questions.

iii) **A study of how language is represented helps us to understand:**

- a) How semantic features of words are stored.
- b) How people express thoughts verbally.
- c) How knowledge is gained and used.
- d) How knowledge is made conscious.

iv) **Psycholinguists have attempted to study the adult mind because:**

- a) Children's minds are not stable.
- b) The adult mind is more stable than children's mind.
- c) Developmental processes are difficult to observe.
- d) Children's early words and early meanings have a tentative existence.

v) **Psycholinguists study bilingual children to understand:**

- a) The relation between two languages.

- b) The role of meaning in linguistic organization.
- c) How each language connects with a system of meanings.
- d) How they construct mental representations for language and concepts.

Section 2: Logical Reasoning

Q. 6: In general, the terms entrepreneur and SME's (small and medium enterprises) are used in conjunction with each other. But entrepreneurship is not just about owning a small business. The very basis of entrepreneurship, irrespective of the size of the organization, lies in its ability to create new products/services, and devising new ways of implementing the existing or new products.

Which of the following best sums up the above passage?

- (A) The major characteristic of entrepreneurs is their ability to introduce new products/services into the market.
- (B) Entrepreneurs are the main actors in economic growth.
- (C) An owner of a large business may be an entrepreneur.
- (D) Entrepreneurs do not own or operate small business.

Q.7: During the summer this year, advertising expenditures on soft drinks increased by 25%, while the consumption of soft drinks increased by 30%. Which of the following is irrelevant to explaining the increase in consumption of soft drinks?

- (A) This summer, soft drink companies offered more volume discounts than competing substitutes.
- (B) Soft drinks were available in more retail outlets this summer.
- (C) The advertisements of soft drinks were more catchy and effective this summer.
- (D) The production of soft drink bottle openers doubled this year.

Instructions for Questions 8-9

A two-way road network exists between the following locations in a city: A and B, A and C, C and E, E and G, E and H, G and D, and D and F. There is also a one-way road between locations D and B; the only possible way of travel is from D to B. None of these road routes intersect each other except meeting at the nodal points in the respective locations. There are no other routes to or from the above locations in the city.

Q.8: Which of the following locations cannot be avoided while traveling from F to H?

- (A) B, C
- (B) D, C
- (C) D, E
- (D) D, A

Q.9: What is the minimum number of locations one would have to touch to reach E from F?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Q.10: The following sentences, when properly sequenced, form a coherent paragraph. Select the most logical order of the sentences.

(i) Transmission and Distribution losses are very high in Indian State Electricity Boards. (ii) Electricity rates have to be raised. (iii) State Electricity Boards in India are making commercial losses. (iv) High technical losses lead to loss of revenue and subsequent rise in electricity prices.

- (A) (ii)-(i)-(iii)-(iv)
- (B) (iii)-(i)-(ii)-(iv)
- (C) (iii)-(i)-(iv)-(ii)
- (D) (i)-(ii)-(iii)-(iv)

Q.11: Seven MBA students are to be assigned projects, as part of their curriculum. Three students (A, B and C) are engineering graduates, two (D and E) are science graduates, and two (F and G) are commerce graduates. The course instructor has offered them three projects coded here as 1, 2 and 3.

No student can take part in more than one project.

There must be atleast one engineering graduate in each project.

B cannot be in the same project as G.

C and F must work on the same project.

E must not work on project 3.

Since projects 1 and 2 are easier, the instructor has allowed only two students to work on these projects.

Which of the following pairs CANNOT work on the same project?

- (A) C and G
- (B) D and F
- (C) D and E
- (D) B and E

Section 3: Quantitative Ability

Q.12: A text book for children is meant to have 216 sq. cms. of actual printed matter in each page. Also, the top and bottom margins are 3 cms. each and the left and right margins are 2 cms. each. The most economical height and width of each page will be respectively

- (A) 16 cms. and 12 cms.
- (B) 20 cms. and 14 cms.
- (C) 24 cms. and 16 cms.
- (D) 18 cms. and 12 cms.

Q.13: The probability of a number being divisible by 3, not divisible by 5 and divisible by either 4 or 6 is

- (A) 1/6
- (B) 2/15
- (C) 1/30
- (D) 5/6

Q.14. Let PQR be a right-angled triangle, right-angled at R, and let RS be the perpendicular from R to PQ. Let PQ=a, QR=b, RP=c, RS=d and PS=e. Which one of the following is not always true?

- (A) $ad=bc$
- (B) $b^2 + c^2 = 2c^2 + \frac{1}{2} a^2$
- (C) $1/d^2 = 1/b^2 + 1/c^2$
- (D) $d^2 = e(a-e)$

Q.15: Five students are participating in a contest. Three teams are to be made in such a way that each student has to be a member of one and only one team. However, team sizes need not be the same. If the order of the teams or the order of the students within the teams does not matter, the number of ways in which three teams can be formed is

- (A) 35
- (B) 7
- (C) 20
- (D) 25

Q.16: Any complex number $x + iy$ can be put in the form $r(\cos\theta + i\sin\theta)$ where r is called the modulus and θ is the argument of the complex number. The complex number z having the least positive argument and satisfying $|z - 5i| \leq 3$ is

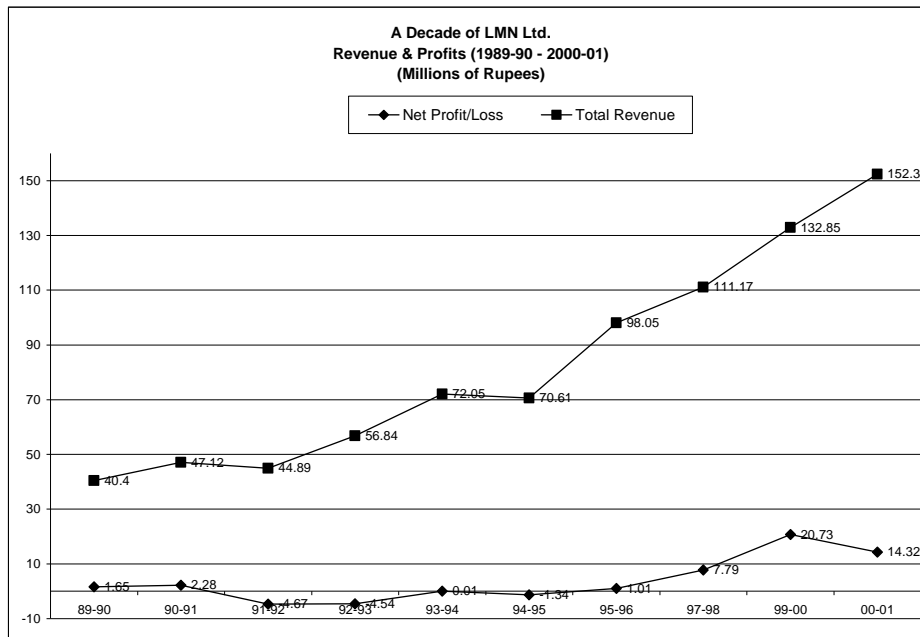
- (A) $9/5 + i(15/5)$
- (B) $2/5 + i(3/5)$
- (C) $12/5 + i(16/5)$

(D) none of the above

Q. 17: The angle of elevation of a kite from a point 100 meter above a lake is 30° and the angle of depression of its reflection in the lake is 60° . The height of the kite above the lake is

- (A) $100\sqrt{3}/3$ meters
- (B) $200\sqrt{3}$ meters
- (C) 100 meters
- (D) 200 meters

Section 4: Data Interpretation



Questions 18 -21 are based on the above graph, which depicts the performance parameters of LMN Ltd, for ten years.

Q.18: In which of the following years did LMN Ltd. suffer a loss?

- (A) 1991-92, 1992-93, 1993-94, 1994-95
- (B) 1990-91, 1991-92, 1992-93, 1993-94
- (C) 1993-94, 1994-95, 1995-96
- (D) 1991-92, 1992-93, 1994-95

Q.19: The highest percentage of growth in total revenue was recorded between the financial years

- (A) 1999-00 and 2000-01
- (B) 1997-98 and 1998-99
- (C) 1992-93 and 1993-94
- (D) 1994-95 and 1995-96

Q.20: If the percentage growth rate between the financial years 1999-00 and 2000-01 was maintained, the total revenue for the year 2001-02 would approximately be

- (A) Rs. 192.30 millions.
- (B) Rs. 171.87 millions.
- (C) Rs. 174.74 millions.
- (D) Rs. 164.41 millions.

Q.21: In which year was the Net Profit at its highest as a percentage of total revenue?

- (A) 1989-90
- (B) 2000-01
- (C) 1999-00
- (D) 1990-91