



MBA ESSENTIALS



MANAGEMENT EXAMS
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ENTRI MAGAZINE ON MANAGEMENT EDUCATION

Management education is increasingly becoming important and playing a central role in the success of managers and organizations worldwide. The importance of the education sector, particularly a professional discipline like management studies, is increasing day by day in our country. In India, Management education has seen a remarkable growth in recent years as reflected in the steep rise in the number of higher learning institutes offering programmes in management at various levels. The Industry Executives world over seeks Management professionals. Management Education system in India is governed by the central government through Ministry of Human Resource Development and its statutory bodies like AICTE, UGC etc

Top MBA Entrance Exams in India 2024:

After graduation, choosing an MBA is like stepping into a powerful accelerator for your career. It's a roadmap that guides you towards leadership skills, strategic thinking, and a deep understanding of how businesses work. In India, every aspirant wishes to pursue Masters of Business Administration programmes from top B-schools including IIMs, XLRI Jamshedpur and MDI, etc

Prior to preparing for any MBA entrance test, candidates should ensure they are well-informed about the important dates related to the entrance exams. The top MBA exam in India is Common Admission Test (CAT). The CAT scores are accepted by 20 IIMs and many more. The eligibility criteria to apply for the CAT exam is graduation with a minimum of 50% aggregate marks (45% for SC/ST/PwD) candidates. Other top national-level MBA exams in India accepted by top management institutes of India are SNAP, NMAT, CMAT, XAT, and GMAT.



MBA Entrance Exams 2024

MBA Entrance Exam Names	Conducting Body
CAT	Indian Institute of Management
CMAT	National Testing Agency
XAT	XLRI Jamshedpur
MAT	The All India Management Association (AIMA)
SNAP	Symbiosis International
MAH MBA CET	The Maharashtra State CET cell
TS ICET	Kakatiya University, Warangal
APICET	Sri Krishnadevaraya University, Ananthapuramu
KMAT	Karnataka Post Graduate Private Colleges' Association (KPPGCA) and also Kerala
TANCET	Anna University
NMAT	Graduate Management Admission Council (GMAC)
IIFT	National Testing Agency
GMAT	Graduate Management Admission Council
IBSAT	The ICFAI Foundation For Higher Education
ATMA	The Association of Indian Management Schools



MBA Entrance Exams Dates 2024

The top national-level MBA exams in India are CAT, SNAP, XAT, CMAT, MAT, ATMA, etc. Candidates can check the list in the table given below

National Level MBA Entrance Exams	MBA Exam Dates
CAT	November 24, 2024 (Tentative)
CMAT	First week of May 2024 (Tentative)
MAT	January 7, 2024
ATMA	To be announced
IPMAT	May 23, 2024



State Level MBA Entrance Exam 2024	Exam Dates
MAH MBA CET	March 9 to 10, 2024 (Tentative)
TS ICET	May 2024 (Tentative)
AP ICET	May 2024
KMAT Kerala	February 2024
KMAT Karnataka	November 2024
TANCET	March 2024

University-level MBA Entrance Exam	Entrance Exam Dates
XAT	January 7, 2024
SNAP	December 2024 (Tentative)
IIFT Exam	To be announced
NMAT	October - December 2024 (Tentative)
TISSNET	Last Week of February 2024
IBSAT	December 23 to 24, 2023

Top MBA Application Fee 2024

MBA Entrance Exam Names	MBA Application Fees (For General Category)	MBA Application Fees Details (For Reserved Category)
CAT	INR 2,300	INR 1,150
CMAT	INR 2,000	INR 1,000
XAT	INR 2,100	-
MAT	INR 2,100	INR 2,100
SNAP	INR 2,250	-
MAH MBA CET	INR 1,000	INR 800
NMAT by GMAC	INR 2,800	-
GMAT	Nearly INR 21,000 (Indian students)	-
ATMA	INR 2,000	-



Top MBA Exam Eligibility Criteria 2024

To get admission into prestigious institutions such as IIMs, XLRI Jamshedpur, and MDI, students must appear for all MBA entrance exams like CAT, MAT, CMAT. Candidates can refer to a comprehensive list of entrance exams after their graduation, offering detailed insights and information crucial for securing admission into various prominent MBA colleges across the country.

CAT 2024

Common Entrance Test or CAT, is a national-level entrance exam and is considered to be the most preferred entrance exam for admission into various MBA and PGDM courses in IIMs, IITs, etc. The CAT scores are accepted by 20 IIMs and over 1200 other management institutes across the country. Every year, more than two lakh candidates appear for the MBA entrance exam.

Candidates must have a Bachelor's degree, with a minimum of 50% marks or equivalent CGPA (45% marks in case of (SC/ST and PwD) category candidates.

The CAT entrance exam is conducted for the duration of 120 minutes. It is divided into three sections i.e. Verbal Ability and Reading Comprehension, Data Interpretation and Logical Reasoning, and Quantitative Ability.

CAT Entrance Exam: Highlights

Candidates who are interested in applying for the CAT exam can check the overview of the Common Admission Test (CAT) in the table below

Particulars	Details
No. of Questions	66 in 2023
Sections in Exam	3 (VARC, DILR and QA)
Exam Duration	2 hours (2 hour and 30 min for PwD Category)
Section Wise Time Duration	40 minutes
CAT Exam Slots	3
Mode of Exam	Computer-based Exam (CBE)
Medium of Instruction	English
Types of Questions	MCQ and Type in Type Answer
CAT Marking Scheme	+3 for every right answer -1 for every wrong answer TITA has no negative marking

CMAT 2024

Particulars	Details
Exam Name	Common Management Admission Test (CMAT)
Conducting Body	National Testing Agency (NTA)
Frequency of the Exam	Annually
Mode of Exam	Online
Exam Medium	English Only
Total Questions	100
Number of Sections	Language Comprehension Quant & DI Logical Reasoning General Knowledge Innovation & Entrepreneurship
Question Type	Objective
Total Marks	400
Duration of Exam	3 hours (180 minutes)



XAT 2024

Xavier School of Management, Jamshedpur conducts Xavier Aptitude Test (XAT) every year for admission into MBA/ PGDM programs. This MBA entrance exam is conducted in online CBT mode and the XAT scores are accepted in over 160 elite B-schools across India for admission. The eligibility criteria for XAT exam is a three-year bachelor degree or its equivalent from any recognised university.

XAT Exam Pattern 2024

Candidates can check the XAT exam pattern from the table given below.

XAT 2024 Particulars	Exam Structure Details
Sections	3 sections : Section 1 Verbal and Logical Ability Data Interpretation and Quantitative Ability Section 2 Mock Keyboard Testing Section 3 General Awareness Essay Writing
Exam Mode	Computer-Based Test (CBT)
Exam Duration	3 hours 30 minutes
Number of Questions	100 - 105
Marking Scheme	1 Mark for Correct Answer 0.25 negative marking for Incorrect Answer After 8 unattempted answers, - 0.10 mark for each unanswered question





NMAT 2024

Narsee Monjee Aptitude Test or NMAT exam is conducted by the Graduate Management Admission Council (GMAC) for admission into MBA courses at NMIMS and other top B-schools. Earlier, the exam was conducted by NMIMS itself. Candidates must hold a bachelor's degree in any discipline from a recognised university or institute to be eligible for NMAT.

NMAT Exam Pattern: Highlights

Candidates can check the NMAT exam pattern in the table mentioned below

Particulars	Details
Examination Mode	Online
Duration	2 hours
Total Number of Sections	Quantitative Skills Language Skills Logical Reasoning
Question Type	Objective (MCQs)
Total Number of Questions	108 questions
Maximum Marks	360 marks
Marks per Question	+1 for every correct answer
Medium	English
Negative Marking	No

SNAP 2024

Symbiosis National Aptitude Test or SNAP is conducted by the Symbiosis International (Deemed University). Candidates who will appear for SNAP entrance exam can get admission into 16 Symbiosis institutes offering MBA and PGDM courses.

Candidates must be a graduate from a recognised university or institution with 50% marks and 45% of aggregate marks for reserved category (SC/ST and PwD candidates).



Aspirants who are in the final year of their graduation can also apply for the SNAP entrance exam.

SNAP Exam: Highlights

Candidates interested in applying for the SNAP entrance exam can check the highlights in the table given below

Particulars	Details
Mode of examination	Computer-based (Online)
Marks per questions	1 mark
Negative Marking	-0.25 marks
Duration of exam	1 Hour
Number of questions	60 questions
Total marks	60 marks
Number of sections	General English Analytical & Logical Reasoning Quantitative-Data Interpretation & Data Sufficiency
Language of paper	English
Number of attempts	Three

ATMA 2024

AIMS Test for Management Admissions or ATMA is organised by the Association of Indian Management Schools (AIMS) for candidates to get admission to various management courses such as MBA, PGDM, etc. Candidates must have a bachelor's degree with at least 50% marks to apply for the ATMA exam.

ATMA Exam: Highlights

Candidates can look at the following details for an overview of the ATMA exam.



Exam Particulars	Details
Exam Name	AIMS Test for Management Admissions (ATMA)
Exam Conducting Body	Association of Indian Management Schools (AIMS)
Exam Mode	Computer-Based Test at Exam Centre
Duration of Exam	3 hours
Exam Timings	2 pm - 5 pm
Exam Application Fee	Unreserved Category: INR 2000 Female Candidates: INR 1500 North-Eastern Candidates: INR 1000
Courses that accept ATMA scores	MBA, PGDM, PGDBA, MCA
Syllabus	Verbal Skills Quantitative Skills Analytical Reasoning Skills
ATMA Exam Dates 2023	25 February 2023 28 May 2023 23 July 2023

GMAT 2024

Graduate Management Admission Test or GMAT exam is conducted by Graduate Management Admission Council (GMAC) for admission to various MBA, PGDM programmes in top B-schools globally. Candidates must be a graduate and no minimum or maximum grade point average is required to register for the GMAT entrance test.

GMAT Exam 2024 Highlights

MBA aspirants can check the overview of the GMAT exam in the table below:

Particulars	Details
Exam name	Graduate Management Admission Test (GMAT)
Exam Level	International Level Exam
Conducting Body	Graduate Management Admission Council (GMAC)
Language	English
GMAT 2024 Exam mode	Online
GMAT Current version test duration	3 hours and 7 min
GMAT 2024 Focus Edition test duration	2 hours 15 min

IMPORTANT POINTS TO BE NOTED

The CAT or Common Admission Test is considered to be the best MBA entrance exam in India.

The top 5 entrance exams for MBA are CAT, XAT, MAT, SNAP, etc.

An MBA is usually a two-year postgraduate degree course in Business Administration.

CAT scores are accepted by more than 1000 B-Schools in India. But there are some top colleges and universities that conduct their own MBA exams, candidates must have a knowledge of other exams as well.

Candidates hold a bachelor's degree from any recognized college/institute, and he/she must be a citizen of India.

In order to prepare for an MBA entrance exam, candidates must focus on Quantitative ability, Verbal ability, Logical reasoning, General knowledge, and Essay writing.

You must pass the 10+2 or the class 12th board examination and have a bachelor's degree to be eligible for MBA entrance exam.

The difficulty level of both the entrance exams i.e. CAT and GMAT exams are high. However, GMAT is considered easier than CAT as it has a



predetermined syllabus unlike CAT.

As per the NIRF rankings 2023, some of the top govt MBA colleges are IIM Ahmedabad, IIM Bangalore, IIM Calcutta, IIM Kozhikode, and IIM Lucknow. The syllabus of the CAT and GMAT entrance exams are almost similar. Candidates can use on-screen calculators during the CAT exam.

The Common Admission Test exam does not have a defined CAT syllabus for preparation, however, candidates are advised to give as many mock tests to get a better understanding of the exam pattern.

The CAT scorecard is valid for one year only.

Cut - off percentile for admission to various top B Schools in 2023

The CAT exam is usually followed by a group discussion (GD), a written ability test (WAT), and a personal interview (PI) round at IIMs. Students can also apply for 88 B-schools that do not fall under the IIM category but are registered with CAT 2023. These institutes have their own admission procedure.

CAT 2023 cut-off: Top IIMs

List of IIMs	CAT Cutoff 2023
IIM Ahmedabad	99-100
IIM Bangalore	99-100
IIM Calcutta	99
IIM Lucknow	97+
IIM Indore	97+
IIM Kozhikode	97 to 98
IIM Amritsar	95+



B-schools accepting 90-95 CAT percentile

These are some of the B-schools that are likely to accept 90-95 percentile in CAT 2023.

B-School	CAT Cutoff Percentile)
IIM Visakhapatnam	90+
IIM Nagpur	90+
IIM Sambalpur	90+
IIM Sirmaur	90+
IIM Jammu	90+
IIM Amritsar	90+
Goa Institute of Management, Goa	92+
Xavier Institute of Management, Bhubaneswar	93+
DoMS, IIT Roorkee	90+
DIME, IIT Kanpur	92+
IISWBM Kolkata	90+
BIM Trichy	90+
Great Lakes Institute of Management, Chennai	90+



Top Non-IIMs: cut off**CAT cut off 2023: MBA colleges accepting 65-70 percentile**

MBA colleges	Expected CAT 2023 cut off
Thiagarajar School of Management, Thirupparankundram	65 percentile
School of Management Studies, University of Hyderabad	65 percentile
AIMS Institutes, Bangalore	65 percentile
PES University, Bangalore	65 percentile
IBS Business School, Bangalore	65 percentile
Lovely Professional University, Jalandhar	70 percentile
Shiv Nadar University, Dadar	70 percentile
Xavier Institute of Social Service, Ranchi	70 percentile
VIT Business School, Vellore	70 percentile
Apeejay School of Management, New Delhi	70 percentile

Top B-schools in the country have an exemplary track record of ensuring 100% placement with handsome perks and packages. Moreover, the international placements range from USD 60,000 to USD 200,000 per annum. The success of these B-schools is clearly seen in the international postings of their students.

All the top institutes have an average package of approximately INR 12 to 18.5 lakhs per annum. The highest salary on offer for domestic placements can be as high as INR 39 lakhs to 1 Crore per annum. The lowest salary is about INR 5.1 to 10 lakhs.

Companies like The Boston Consulting Group, McKinsey & Company, Amazon, Aditya Birla Group, Goldman Sachs, Deloitte, Flipkart, Cognizant, HSBC, Citi Bank, Vodafone, HCL, Wipro, HP, Airtel and many more recruit the deserving candidates.

The given table will give you a comprehensive idea of the pay packages offered by such companies during the placements.



INSTITUTE	AVERAGE INDIAN SALARY (in INR lakhs/annum)	HIGHEST INDIAN SALARY (in INR lakhs/annum)
IIM AHMEDABAD	15.88	39.81
IIM BANGLORE	21.03	100
IIM CALCUTTA	15.32	75
IIM INDORE	15.67	32
IIM LUCKNOW	15.8	22
IIM SHILLONG	16.54	23.35
IIM KOZHIKODE	13	37
IIM TRICHY	13.01	23.81
IIM ROHTAK	11.78-14.96	18.3
IIM RAIPUR	12.51- 16.07	21.5
IIM UDAIPUR	12.12	21.5
XLRI	16.2	32
FMS	17.04	26
IIFT	18.01	29
MDI SP JAIN	18.53	32.1
IRMA	19.3	37
TISS	8.5	27.4
XISS RANCHI	16	27.5
SCMHRD	5.1	NA
SIBM	13.24	22.6
	14.23	27.88



Education Loan for MBA

Top Colleges in India for MBA

- Indian Institute of Management, Ahmedabad
- Indian Institute of Management, Bangalore
- Indian Institute of Management, Calcutta
- Indian Institute of Management, Lucknow
- Indian Institute of Management, Kozhikode
- Indian Institute of Management, Indore
- Department of Management Studies, Indian Institute of Technology, Delhi
- Department of Management Studies, Indian Institute of Technology, Madras
- Indian Institute of Technology, Roorkee
- Faculty of Management Studies, Delhi
- XLRI – Xavier School of Management, Jamshedpur

Latest Fee Structure

Institutes	Fee in INR (approx. in lakhs)
IIM Ahmedabad	23.3
IIM Calcutta	22.6
IIM Bangalore	23.2
IIM Kozhikode	20.5
IIM Lucknow	19.2
MDI Gurgaon	24.3
XLRI Jamshedpur	23.6
SIBM Pune	20.7
IIFT Delhi	18.3
SPJIMR Mumbai	19.2
K J Somaiya Mumbai	16.3
IMI New Delhi	19.2
IMT Ghaziabad	19.5
IPE Hyderabad	10.8
IFIM Bangalore	12.2
IFMR Chennai	13.8



In India, public sector institutions such as State Bank of India, Punjab National Bank, Central Bank of India, Punjab & Sind Bank, Dena Bank, and Canara Bank offer MBA education loans.

Private sector banks such as ICICI Bank, Axis Bank, and Kotak Mahindra Bank also provide MBA education loans. There are also specialized NBFCs that offer MBA education loans in India, such as HDFC Credila Financial Services Limited and Avanse Financial Services.

Almost every public sector bank provides an MBA education loan. Among the public sector banks and financial institutions that offer MBA admission education loans, the following are the top education loan providers in India:

Banks	Loan Amount in INR (max.)	Interest Rate (in %)
SBI	30	8.05-10.15
PNB	75	8.35-10.95
Canara Bank	40	8.65-10.75
Dena Bank	15	10-11.8
Central Bank of India	20	8.9-10.4
Punjab & Sind Bank	10	9.75-10.75
Union Bank of India	30	8.65 onwards

Loans Offered by Private Sector Banks and NBFCs

IDBI Bank	20	8.5 to 10
Axis Bank	75	8.8 onwards
ICICI Bank	50	10.5 onwards
Avanse Financial Service	No limit	10-16.5
Kotak Mahindra Bank	10	11.5
HDFC-CREDILA	45	10.5

To be eligible for an education loan for an MBA in the United States, applicants must meet the following criteria:



- In order to graduate, students must achieve a grade point average of at least 60%
- There should be no gaps in their academic records
- The co-borrower's CIBIL score should be over 700
- If the applicants have academic gaps, they must provide the bank with a medical certificate or other relevant proof

The RBI has not imposed any age limitations on education loans for MBA. Some banks, however, may set a 35-year-old age limit.

SYLLABUS OF THE EXAM

VARC (Verbal Ability and Reading Comprehension) for CAT is arguably the most confusing section, especially for candidates with a technical background. Sometimes, you do not understand why the answer is right.

Unlike Quantitative ability or logical reasoning CAT sections, in Verbal ability, there is no logical explanation or mathematical step-by-step solution to the answer. The answer is simply the answer. This is how the language is.

Let us first talk about the format of the VARC CAT. Out of the total of 34 questions, in general, the larger chunk of 24 questions goes to RCs ie. Reading comprehension and the remaining 10 questions come from the Verbal Ability part. So, the first area to focus your efforts on is the RCs.



CAT VERBAL ABILITY QUESTIONS FOR PRACTICE

CAT Parajumble Questions

Directions for question 1: In the following questions, there are sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are correct in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the most appropriate option.

- A. Wren was standing just outside the High Council doors, staring absently at patches of bright, star-filled sky
- B. and thought that she could barely remember her life before the beginning of her quest, when Gavilan came up to her.
- C. The others had already gone, all but Garth, who lounged against a tree some distance over, looking out at the city.
- D. Earlier, Wren had searched for Eowen, hoping to speak with her, but she has disappeared.
- E. Now she turned as Gavilan approached, thinking of speaking with him instead, of asking him the questions she was still anxious to have answered.

- 1) A & C 2) A & E 3) B & E 4) C & D

Odd Sentence

Directions for question 2: In the following questions, a word has been used in sentences in four different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

2. HEART

- 1. She used to wear her heart on her sleeve when she was younger, but life taught her to be more reserved.
- 2. He met his heart of hearts when he was just a teenager, and they have been together ever since.
- 3. He had his heart set on becoming a musician, so he was miserable when his parents forced him to study engineering instead.



4. Though our father was always strict and stern, we knew his heart was in the right place.

Word Usage Questions

Directions for question 3: In each question, there are four sentences. Each sentence has a pair of words that are italicized and highlighted. From the italicized and highlighted words, select the most appropriate words (A or B) to form correct sentences. The sentences are followed by options that indicate the words that may be selected to correctly complete the set of sentences. From the options given, choose the most appropriate ones

3. The lower classes were not powerful enough to come out from under the yolk (A) / yoke (B) of oppression.

The servant returned after a long time, abased (A) / abashed (B) that he had been unable to find his master and convey the message to him.

The defendant is liable (A) / libel (B) to be found guilty, unless he can produce some evidence that he did not threaten the victim.

Electromagnetic signals tend to attenuate (A) / accentuate (B) over a distance, so over the large interstellar distances, much information is lost.

- 1) BBAA 2) BBAB 3) ABAB 4) AABB

Odd Sentence Questions

Directions for question 4: Each question has four sentences pertaining to a subject, which may or may not be in sequence. One of the sentences is contextually/logically incorrect. Choose the option corresponding to the sentence that is incorrect or inappropriate.

- 1) Many alchemists believed that all matter was a mixture of four elementary substances: water, air, earth and fire.



- 2) The transmutation of the elements was pursued in medieval laboratories in a quest called alchemy.
- 3) The defining objectives of alchemy included the creation of the fabled philosopher's stone, which among other things, could create an elixir of life conferring youth and longevity.
- 4) By altering the relative proportions of earth and fire, say, you would be able, they thought, to change copper into gold.

Parajumbles

Directions for question 5: The sentences given in each question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences, from among the given choices, to construct a coherent paragraph.

- 1) These creation myths insist on a continuum, or at least a negotiable boundary, between animate and inanimate matter.
- 2) That is usually regarded as the work of the gods.
- 3) Many creation myths insist that the first people were fashioned from clay, mud, dirt: primal matter given a life-soul by supernatural means.
- 4). Who made humans?
- 5) That continuity is also demanded by any purely scientific theory of life's origins on earth, but in myth this usually takes the form of a kind of animism in which life is immanent in all matter.
- 6) The Egyptian god Khnum made humankind this way from the clay of the Nile basin; the goddess Nuwa formed the Chinese people from yellow earth; in the Book of Genesis, the Judaeo-Christian god 'created man of the dust of the ground'.



- 1) CFADBE 2) DFCAEB 3) CAEDBF 4) DBCFAE

Directions for question 6: Each question has a paragraph from which the last sentence has been deleted. From the given options, choose the sentence that completes the paragraph in the most appropriate way.

6. Our embrace of the idea that computer databases provide an effective and even superior substitute for personal memory is not particularly surprising. It culminates a century-long shift in the popular view of the mind. As the machines we use to store data have become more voluminous, flexible and responsive, we've grown accustomed to the blurring of artificial and biological memory. But it's an extraordinary development nonetheless. The notion that memory can be 'outsourced' to machines would have been unthinkable at any earlier moment in our history.

For the Ancient Greeks, memory was a goddess: Mnemosyne, mother of the Muses. To Augustine, it was 'a vast and infinite profundity', a reflection of the power of God in man. Now, his words seem old-fashioned. Not only has memory lost its divinity, it's well on its way to losing its humanness.

1. Now memory is outsourced to machines.
2. God is no longer in the machine.
3. Mnemosyne has become a machine.
4. Mnemosyne is irrelevant in the information age.

Reading Comprehension Question.

Directions for questions 7 to 10: The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.

Two of the four main physical forces are familiar ones: electromagnetism and gravity. Even though it is the most obvious force we experience in everyday life, gravity is by far the weakest of the four. The reason why it is so important to us is that our weight is caused by the pull of the entire Earth, almost six million billion billion kilograms of matter (6×10^{24} kg), acting together.





It takes the gravitational pull of all that mass put together to hold us down on the surface of the Earth with the weight we feel.

This can be put in perspective by comparing the strength of gravity with the strength of the electromagnetic force, or with one aspect of electromagnetism: the electric force. The electric force of repulsion between two protons is 1036 times stronger than the strength of the gravitational attraction between the same two protons the same distance apart.

On the nuclear and atomic scales, gravity is utterly insignificant, and molecules are held together by electric forces without any complications caused by the gravitational interactions between atoms.

These electric forces can, of course, produce attraction, not just repulsion, which is what holds electrons and nuclei together in atoms, and holds atoms together to make molecules.

On the surface of the Earth, there is constant competition between electric forces holding things together and gravitational forces tending to break things apart. Because of this smaller bodies can survive more easily if they suffer a fall. But a large animal is likely to suffer broken limbs even by falling over, let alone in a fall from a tree or over a cliff. We humans are close to the limit of how big an active animal can be and survive on Earth. In order to be much larger than a human being, you have to be sturdy and ponderous, like an elephant, or live in the sea, like a whale, where the water offers support. Roughly speaking, the rule of thumb is that the volume of a body (and therefore its mass) is proportional to the cube of its linear size (its height), but the strength of its bones is only proportional to its cross-section, which depends on the square of the linear size. Since mass is proportional to volume, and the force of gravity pulling on a body (its weight) is proportional to its mass, as bodies get bigger the forces operating when they fall increase more than the ability of their bones to withstand a fall.



This puts the seemingly incredible weakness of gravity in a different perspective. Suppose gravity were a million times stronger (which would still leave it 1030 times weaker than the electric force). This would not be enough to affect atomic and molecular processes, so everything on the scale of atoms and molecules – in particular, chemistry – would operate the way it does in our Universe.

But because of the volume rule, anything living on the surface of a planet in such a Universe would also have to be very small, in order not to break apart when it fell over. There could not be anything as large as us, and nothing with the same sort of complexity as us.

Most important of all, in this high-gravity universe, the stars would live for only about 10 thousand years before they had used up all their fuel, instead of living for about 10 billion years, as stars like the Sun do in our Universe. Since the chemistry in such a universe would be no different from that in our Universe, there would be no time for evolution even to begin. Gravity has to be as weak as it is for us to exist. A truly cosmic coincidence!

7. What is the main point of this passage?

- 1) Gravity is far weaker than the other physical forces like electromagnetism.
- 2) It's a cosmic coincidence that gravity is as weak as it is.
- 3) Gravity has to be as weak as it is in order for life to exist.
- 4) If gravity hadn't been as weak as it is, humans would never have evolved.

8. Would an elephant have an advantage over a human being in a universe in which gravity was a million times stronger than in ours?

- 1) Yes, as it would be better able to withstand a fall, because it is sturdy and massive.
- 2) Yes, as its bones would be proportionally stronger in comparison to its mass.

- 3) No, as it would be too heavy to survive for long.
 4) No, as neither would be likely to evolve in the first place.

9. Which of the following is true about the electric force, as per this passage?

- I. The electric force is the strongest of the four main physical forces.
 II. The electric force of repulsion between two protons is 1036 times stronger than the strength of the attraction between the same two protons.
 III. Atoms and molecules are held together by the forces of electric attraction.

- 1) Only II 2) Only III 3) I and II 4) I and III

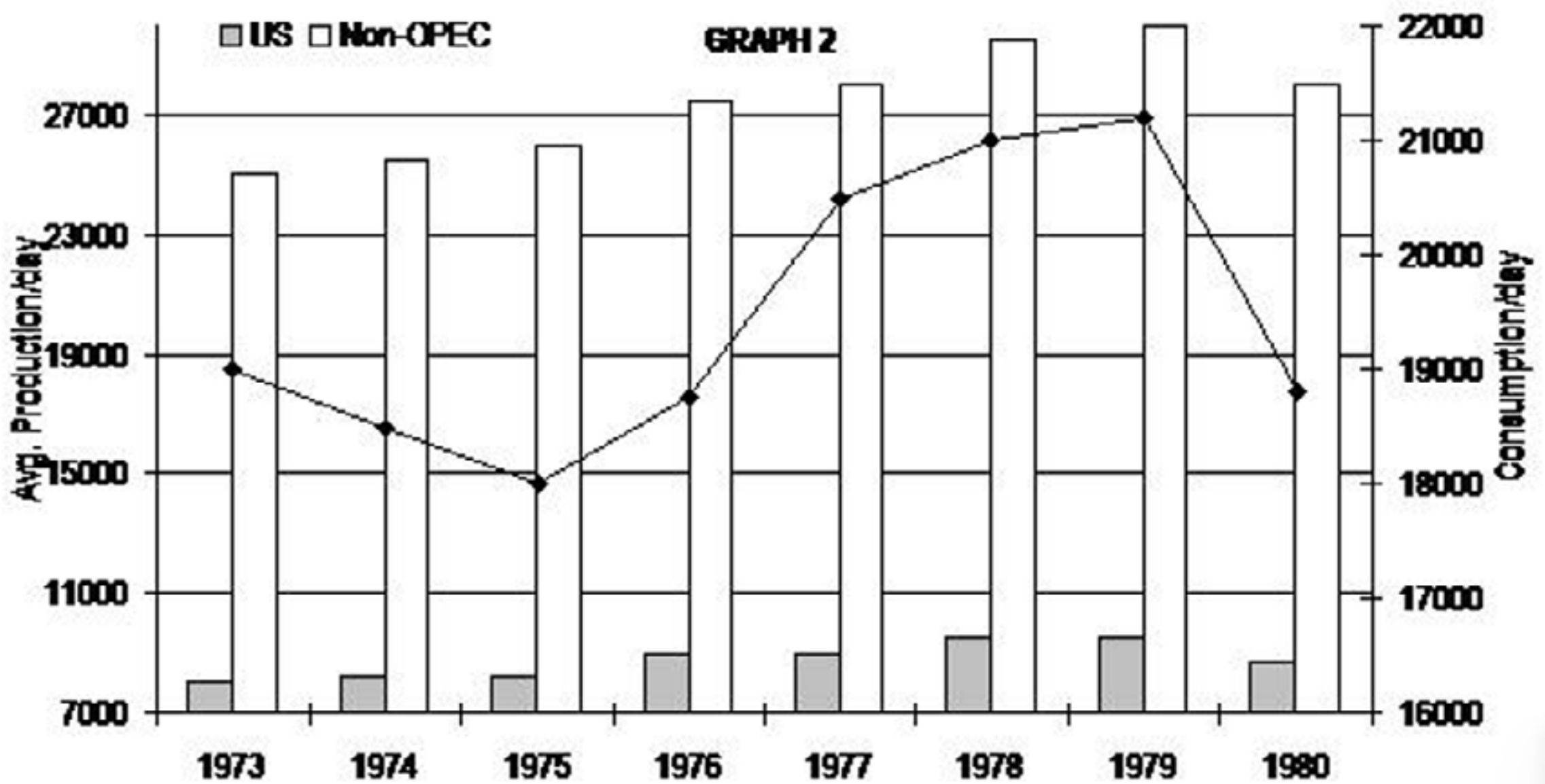
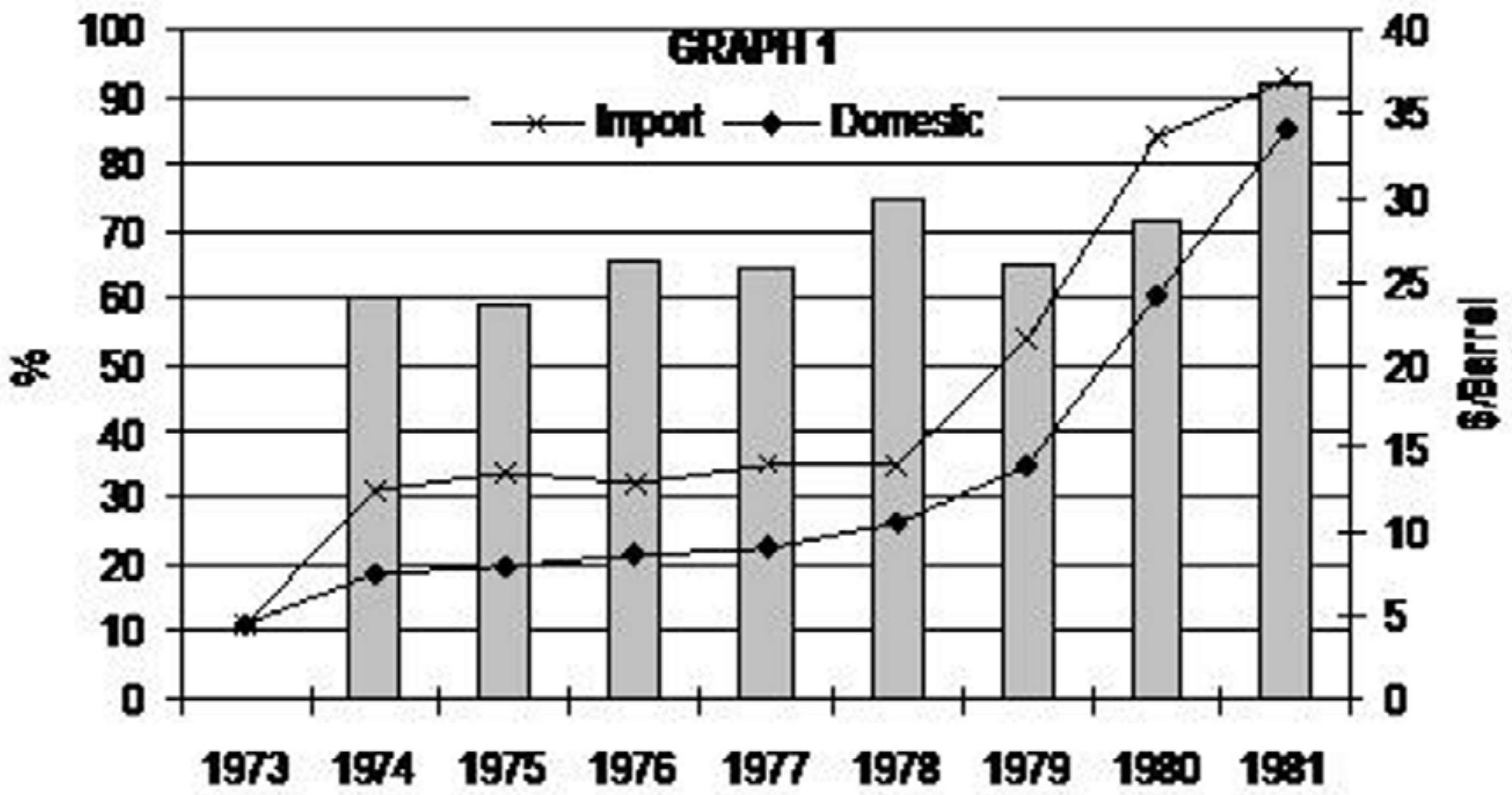
10. This passage describes a hypothetical high-gravity universe. Which of the following is likely to be true, as per the information given in the passage, in a hypothetical universe in which gravity is a million times weaker than it actually is?

- 1) Chemistry would work very differently from that in our Universe.
 2) More animals would evolve to be as large as or even larger than whales.
 3) Stars and planets would never form, as gravity would not be strong enough to pull enough material together.
 4) None of the above.

Data Interpretation Questions for Practice

Directions for questions 1 to 4: Refer to the following information on prices and production of crude oil for the period 1973-80 and answer the questions given below. In the first graph, the lines show the prices of crude oil per barrel for domestic production and imports while the bars show the domestic price as a percentage of the import price. In the second graph, the bars show average production of barrels per day in the US and Non-OPEC countries, while the line shows the consumption of oil in the US.





1. In 1979, if the US imported crude oil in order to meet demands, what is the total cost of imported crude oil?

- 1) USD 455,800/day 2) USD 296,800/day 3) USD 376,300/day
- 4) USD 251,550/day

2. What is the difference between the total cost of domestic production of crude oil in the US in 1975 and the total cost of crude oil imported by the US in order to meet demands in this year?

- 1) USD 49,500/day 2) USD 96,750/day 3) USD 53,625/day



4) USD 65,625/day

3. Which of the following statements is/are true?

1) The percentage change in the price of imported crude oil in 1974 is approximately 120%.

2) In 1977, the absolute difference between the percentage change in the price of domestic oil and the percentage change in the price of imported oil is approximately 2.

3) The percentage change in the consumption of oil by the US from 1973 to 1979 is -80%.

4) In 1977, the ratio of production of oil by non-OPEC countries to that by the US is 4.25.

1. I only

2. II only

3. III only

4. II and III

4. What is the difference between the percentage change in the price of imported oil and the price of domestic oil in 1976?

1) 2.55

2) -9.95

3) -19

4) 1.25

Directions for questions 5 to 8: Table A shows the number of hits scored by leading male actors of the Bollywood film industry in the past 5 years. Table B gives data on who were leading ladies in each of these hit films. The data for the four established actresses is given separately, while the hits of all the other heroines are clubbed under the head "Others".

	2000	2001	2002	2003	2004
Actors					
SRK	1	0	2	1	1
VO	1	2	0	0	1
AK	0	0	1	1	0
HR	0	1	1	0	1
SK	1	0	1	0	1

AR	2	0	1	0	1
RM	1	1	0	1	0
PZ	0	1	1	1	0
MD	0	1	0	0	1
HR	0	1	1	0	1
MD	0	1	0	0	1
Others	0	0	3	0	2

Note:

- AR and SK have vowed never to work together in a film. Also PZ has not yet worked with VO.
- Among the four established actresses, AK only works with RM.
- All of SRK's hits in the past 5 years have been with only two actresses.
- VO only works with established actresses.

5. In 2002, SRK's two hits have been with

- 1) AR & PZ 2) AR & others 3) PZ & others 4) RM & MD

6. MD's two hits in the past 5 years have been with

- 1) VO and SK 2) VO only 3) VO and SRK 4) VO & HR

7. HR's hits have been with

- 1) RM & AR 2) RM & PZ 3) Others & PZ 4) MD & AR

8. Which actor/actors had the highest number of hits with "other" actresses?

- 1) AK 2) HR 3) HR & SK 4) SK

Directions for questions 9 to 12: Refer to the following information and answer the questions given below.



The table below shows the financial performance of business houses for a particular year. Study the table and answer the questions based on the information contained in the table.

Tata	2,671,163	963,496	1018,262	1,934,490	341,976
Birla	2,039,079	969,612	792,092	1,280,812	324,145
Reliance	1,152,904	719,265	249,749	549,367	145,801
ESSAR	1,054,419	342,532	458,843	155,391	91,092
RPG	658,631	286,670	264,555	289,391	62,580
JK	490,622	196,010	197,141	285,150	45,964

Thapar	443,936	207,870	121,217	357,406	54,782
L & T	411,672	211,810	65,605	305,442	51,689
ITC	324,964	125,544	120,442	313,948	72,257
Mafatlal	183,733	62,600	783,754	1,611,263	26,485

Tata	248,422	156,487	12.8	9.3	16.2
Birla	226,078	145,544	17.7	11.1	15.0
Reliance	134,369	106,485	24.5	11.6	14.8
ESSAR	70,907	57,438	45.5	6.7	16.8
RPG	28,671	14,738	9.9	4.4	5.1
JK	27,690	12,660	9.7	5.6	6.5
Thapar	33,867	22,412	9.5	7.6	10.8
L & T	44,002	27,736	14.4	10.7	13.1
ITC	54,721	33,362	17.4	16.8	26.6
Mafatlal	16,336	8,905	10.1	8.9	14.2

9. If NP/NW ratio is considered to be an index of performance, which of the business houses is the best performer?

- 1) Tata 2) ITC 3) Birla 4) Reliance

10. If executive compensation is a function of operating profit on sales, which organisation would be the most remunerative for an executive?

- 1) Birla 2) Mafatlal 3) RPG 4) ESSAR



11. If dividends are a function of net profit over net worth, which company should a person invest in?

- 1) Tata 2) ESSAR 3) ITC 4) RPG

12. As compared to the JK group, which one of the groups could be termed as lean, i.e., having total assets \pounds those of JK, and thin, i.e., having borrowings \pounds those of JK as well as performing better, i.e., better in sales and net profits than JK?

- 1) ESSAR 2) Mafatlal 3) Reliance 4) ITC

Quantitative Aptitude Questions for Practice

Percentage Questions

DIRECTIONS for questions 1 to 5: Answer the question independently.

1. A dishonest shopkeeper sells sugar at cost price but makes 25% profit by using faulty weights. He decides to give a discount to attract more customers. What percent of discount should he offer to make 12% profit?

- 1] 15.2% 2] 12.5% 3] 10.4% 4] 13%

2. N is a natural number having the sum of its digits as 3. If 101314, then how many values can 'N' assume?

- 1] 93 2] 91 3] 78 4] 105

3. Two barrels A and C contain alcohol and water in the ratio 1:a and 1:c, respectively. Equal quantity of mixtures from barrels A and C are mixed to get a mixture with alcohol and water in the ratio 1:b, where b is the arithmetic mean of a and c. What can be the value of $\frac{a}{b} \cdot \frac{b}{c}$, if a, b and c are integers?

- 1] 14 2] 10 3] 15 4] 8

4. Given 2 positive integers, 'x' and 'y' with $x > y$

- 1] 10 and 1990 2] 900 and 1880 3] 1 and 1890 4] 1 and 900



5. Ajay plans to host a lunch for his friends at a restaurant. He decides to keep 1 starter and 2 main courses for the lunch. From the menu, he realizes that there are only 15 ways to fulfill his requirement. What can be the total number of dishes available on the menu?

- 1] 4 2] 5 3] 6 4] 7

6. If 'a' is positive and $a^4 - 62a^2 - 1 = 0$, find the value of $a^3 + \frac{1}{a^3}$

- 1] 648 2] 392 3] 488 4] 512

7. A six-faced unbiased die is thrown ten times. The results of these ten throws are written side by side, from left to right so as to form a ten-digit number, such that the first four digits form a four digit number which is the greatest four-digit square possible. Similarly, the next three digits, next two digits and the last digit form the greatest possible three-digit, two-digit and one-digit perfect squares respectively. Find the sum of digits of that ten-digit number.

- 1] 45 2] 46 3] 42 4] Cannot be determined

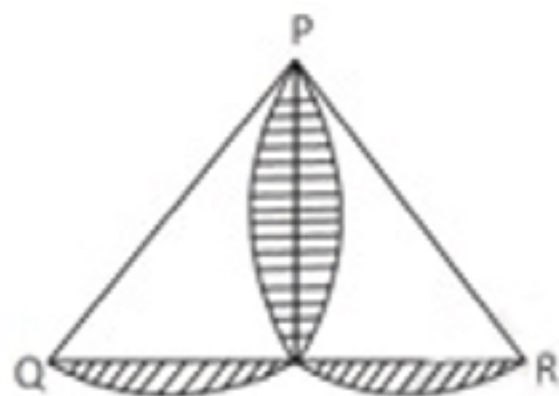


Time and Distance Questions

8. On a 120 kms racing track, if P and Q start driving in the same direction from the same point and at the same time, then P wins the race by 25 minutes. If they drive towards each other from the opposite ends on the same track starting at the same time, the distances that P and Q cover when they meet are in the ratio 3:2. Find the speed of P's car.

- 1] 96 kmph 2] 48 kmph 3] 144 kmph 4] 72 kmph

9. PQR is an isosceles right angled triangle with $\angle QPR = 90^\circ$. Semicircles are drawn with PQ and PR as diameters. Find the ratio of the area of the shaded region to the area of the triangle PQR.



1] $\frac{4-\pi}{3}$

2] $\frac{\pi-1}{4}$

3] $\frac{\pi-2}{2}$

4] $\frac{2\pi-3}{4}$



10. If the n th term of a series is $T_n = n^3 - (n - 1)^2$, then find the sum of the first n terms of the series.

$$1) \frac{3n^4 + 2n^3 + 9n^2 - 2n}{12}$$

$$2) \frac{3n^4 + 4n^3 + 6n^2 - n}{12}$$

$$3) \frac{3n^4 + 3n^3 + 2n^2 - n}{18}$$

$$4) \frac{3n^4 + n^3 + 2n^2 - 6n}{16}$$

VARC. Answer Key – 1-2, 2-2, 3-1, 4-3, 5-4, 6-3, 7-4, 8-4, 9-2, 10-4.

DILR – 1-4, 2-4, 3-2, 4-2, 5-1, 6-2, 7-3, 8-3, 9-2, 10-4, 11-3, 12-4

QA – 1-3, 2-4, 3-3, 4-3, 5-4, 6-2, 7-1, 8-3, 9-3, 10-2.

GENERAL ITEMS.

ARTICLES

1. Union Budget 2024-25 Key Highlights & Announcements

Finance Minister Nirmala Sitharaman confirmed the continuation of existing tax rates, covering direct, indirect taxes, and export duties. She also disclosed an 11% surge in the upcoming year's capex outlay, reaching ₹11.1 lakh crore. Sitharaman, during the fiscal year's federal budget announcement, revised the fiscal gap to 5.8% of the gross domestic product.

The Finance Minister also introduced a housing scheme for the deserving middle class, focusing on those living in rented houses, slums, chawls, or unauthorised colonies.

Prime Minister Modi stated that this initiative would assist them in acquiring or constructing their own homes.

Amid various announcements benefiting youth, the impoverished, women, and farmers, Sitharaman highlighted the extension of Ayushman Bharat healthcare coverage to all ASHA and Anganwadi workers and helpers.

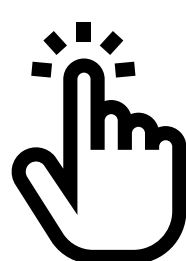
Highlights of Interim Budget 2024-25

- There are no changes in direct, indirect tax rates
- The government withdrew income tax demands up to ₹25,000 (till 2009-10) and ₹10,000 from 2010-11 to 2014-15. This will benefit about one crore taxpayers
- A scheme to help middle class living in rented houses to buy or build their own houses will be launched
- Tax benefits to start-ups and investments made by sovereign wealth or pension funds extended by 1 year till March 31, 2025
- Capital expenditure hiked 11% to ₹11.11-lakh crore
- Fiscal deficit for FY25 projected at 5.1%, lower than the revised estimate (5.8%) in FY24
- Govt to borrow ₹14.13-lakh crore in next fiscal, lower than ₹15.43 lakh crore in FY24
- Nominal GDP growth for FY25 is projected at 10.5%
- Mop-up from central public sector enterprises (CPSEs) disinvestment pegged at ₹50,000 crore for FY25, up from ₹30,000 crore in FY24
- Gross tax revenue target for FY25 hiked 11.46% to ₹38.31-lakh crore, from ₹34.37 lakh crore in FY24
- Direct tax collection target set at ₹21.99-lakh crore, while that of indirect tax is at ₹16.22-lakh crore
- The government will release a white paper on mismanagement of economy prior to 2014
- Next generation reforms will be unveiled in consultation with States and stakeholders
- Govt to form high-powered panel to address population growth challenges and connected matters.



CAT 2023 MEMORY BASED

PAPER QUIZ



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