CADET COLLEGE PREP

Model Paper for Admission of Students in Class 7th

Balochistan Academy for College Teachers (BACT), Quetta · 2024 · Total marks 100 (Objective 40 · Subjective 60) · Time allowed: 3 hours

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Name: _____ Date: _____ Score: _____ / 100

OBJECTIVE PORTION — 40 MARKS

ENGLISH MCQS — 10 QUESTIONS · 10 MARKS

Q1. Ibne Sina was born in _____.

(a) Sparta
(b) Samarkand
(c) Bukhara
(d) Mash'had

Q2. Beauty and cleanliness are _____.

(a) Collective noun
(b) Concrete noun
(c) Proper noun
(d) Abstract noun

Q3. The plural of 'ox' is _____.

(a)oxes
(b)oxen
(c)oxed
(d)oxis

Q4. My brother gave a gift _____.

(a)me
(b)for me
(c)to me
(d)from me

Q5. There is not _____ water in the stream.

(a)more
(b)many
(c)enough
(d)too many

Q6. A word that describes a noun is called:

(a) Adverb
(b) Adjective
(c) Conjunction
(d) Pronoun

Q7. The child _____ because he is hungry.

(a)was crying
(b)is crying
(c)crying
(d)has been crying

Q8. Change into the passive: My brother plays football.

(a) Football is played by my brother.
(b) Football is being played by my brother.
(c) Football was being played by my brother.
(d) Football was played by my brother.

Q9. Change into the negative: We began to work hard for the test.

(a) We did not began to work hard for the test.
(b) We did not begun to work hard for the test.
(c) We did not begin to work hard for the test.
(d) We did not begins to work hard for the test.

Q10. 'He has been studying here for ten years.' Which tense is it?

(a) Present Continuous Tense
(b) Present Perfect Continuous Tense
(c) Past Perfect Tense
(d) Past Perfect Continuous Tense

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Q21. Which one represents the infinite set?

(a) {g, h, i, j}
(b) {1, 3, 7, 9, 11, 13}
(c) The set of real numbers
(d) The set of boys in your school

Q22. 12130 is divisible by:

(a) 6
(b) 5
(c) 4
(d) 3

Q23. If we subtract −13 from −6, the result is:

(a) −7
(b) 7
(c) −19
(d) 19

Q24. 8 – (6 – 6 ÷ 2) is equal to:

(a) 2
(b) 5
(c) 6
(d) 8

Q25. The second element of 5, 10, 14 will be

(a) 5
(b) 7
(c) 9
(d) 12

Q26. An object was sold at Rs. 48. If profit is 20%, then cost price will be:

(a) Rs. 15
(b) Rs. 25
(c) Rs. 20
(d) Rs. 40

Q27. The expression for 'three more than x multiplied by two' is:

(a) 2 × x + 2
(b) 2 × x + 3
(c) 3(x + 2)
(d) 2(2x + 3)

Q28. The common end points of two rays are called:

(a) Angle
(b) Line
(c) Vertex
(d) Line segment

Q29. Area of a rectangle is:

(a) one dimensional
(b) two dimensional
(c) three dimensional
(d) four dimensional

Q30. Number of vertices in a cuboid is:

(a) 6
(b) 8
(c) 9
(d) 12

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GENERAL SCIENCE MCQS — 10 QUESTIONS · 10 MARKS

Q31. Which one of the following is in an animal cell?

(a) Cell wall
(b) Centriole
(c) Chloroplast
(d) One big vacuole

Q32. There are three bones in the ear. Where are these located?

(a) Outer ear
(b) Middle ear
(c) Inner ear
(d) Auditory nerve

Q33. Which gas is used in photosynthesis?

(a) Nitrogen
(b) Chlorine
(c) Oxygen
(d) Carbon dioxide

Q34. Which organisms are called producers?

(a) Plants
(b) Bacteria
(c) Fungi
(d) Animals

Q35. Calcium carbonate is used:

(a) in white wash
(b) in construction
(c) as fuel
(d) as food

Q36. The percentage of nitrogen in the air is:

(a) 0.03%
(b) 1%
(c) 20.9%
(d) 78%

Q37. Where are pollen grains located in?

(a) Ovary
(b) Anther
(c) Sepals
(d) Petals

Q38. The energy of a moving object is called:

(a) kinetic energy
(b) potential energy
(c) electrical energy
(d) solar energy

Q39. Which of the following is an example of a wheel and axle system?

(a) Knife
(b) Screwdriver
(c) bottle opener
(d) Hammer

Q40. Passage of a light ray through a certain object is called:

(a) Transmission
(b) Absorption
(c) Reflection
(d) Diffused reflection

URDU MCQS (Q11–Q20) — 10 MARKS

Not reproduced in this typeset: the available copy's Urdu script is too degraded for a word-for-word transcription, and nothing is guessed. Sit this section from the official document — the site page carries the official links: https://www.bact.edu.pk/modal_paper.php

SUBJECTIVE PORTION — 60 MARKS

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ENGLISH — SHORT QUESTIONS — 10 MARKS

Answer any five questions. (2 × 5 = 10 marks)

I **(2)** Who was the first woman who embraced Islam?

II **(2)** What are the causes of air pollution?

III **(2)** What message does Eid give?

IV **(2)** What should we do before getting on a bus?

V **(2)** How should we serve our country?

VI **(2)** What was the name of the first woman who embraced Islam?
Scan note: The scan prints a near-duplicate of item I here.

VII **(2)** How should we behave with other passengers while travelling on a bus?

URDU — SHORT QUESTIONS — 10 MARKS

Answer (any five) questions from the following. (2 × 5 = 10 marks)

— (10 total) Item text not transcribable readably from the scan.
Scan note: The Urdu subjective items are too degraded in the available scan for a faithful transcription. The official document at the provenance links above carries it readable; the skills tested — محاورے، جملوں کی درست صورت، عبارت — are practised in this site's Urdu units.

MATHEMATICS — 10 MARKS

Q1 **(3)** A number is multiplied by 5 and 3 is subtracted from it. If the result is 32, find the number.
Method: Build the equation one operation per line: 5x − 3 = 32 → 5x = 35 → x = 7. Check by running the paper's sentence on 7: 5 × 7 − 3 = 32 ✓.

Q1 OR **(3)** Find the HCF of 60, 72 and 84.
Method: Prime factorise: 60 = $2^2 \cdot 3 \cdot 5$, 72 = $2^3 \cdot 3^2$, 84 = $2^2 \cdot 3 \cdot 7$. Common factors $2^2 \cdot 3 = 12$ → HCF = 12. HCF takes the LOWEST power of each shared prime.

Q2 **(3)** The marked price of an object is Rs. 2500. If the sale price is Rs. 2400, find the discount percentage.
Method: Discount is always measured on the marked price: (2500 − 2400) / 2500 = 100/2500 = 4%. Divide by the MARKED price — dividing by the sale price is the classic wrong-turn.

Q2 OR **(3)** Simplify: 75 ÷ 35 × 46 − 43 (mixed-fraction expression as printed).
Scan note: The exact fractions in this expression are not legible in the scan — attempt the other option.

Q3 **(4)** A piece of cloth is 32 m long. Two pieces have been cut from it; find the length of the remaining piece.
Scan note: The cut lengths print as two mixed fractions the scan leaves half-legible (roughly 3⅕ m and 5⅔ m by the visible denominators). Method regardless of the exact numbers: remaining = 32 − (first piece) − (second piece), subtracting as mixed fractions with a common denominator.

SCIENCE — SHORT QUESTIONS — 10 MARKS

Answer in 3 to 4 lines.

Q1 **(3)** Differentiate animal cell and plant cell.
Method: Three columns: cell wall — plant only; chloroplast — plant only; one big central vacuole — plant, where the animal cell has several small ones. The centriole is the animal-side structure.

Q1 OR **(3)** Write a short note on respiration in plants.

Q2 **(3)** What is the difference between a fixed pulley and a moveable pulley?
Method: Fixed pulley: the wheel stays put and only the rope runs over it — it changes the direction of your effort without multiplying force. Moveable pulley: the wheel travels with the load and shares the weight, so force required drops.

Q2 OR **(3)** Differentiate concave mirror and convex mirror.
Method: Concave curves inward and can converge light to a real focus (think of the inside-surface of a spoon); convex bulges outward and always spreads light into an upright, smaller virtual image (the outside-surface).

Q3 **(4)** When an empty glass is inverted vertically in a tub of water, the water does not enter inside the inverted glass. Why is it so?
Method: The glass goes down full of air, and the air cannot escape sideways through a closed top boundary — it stays trapped ABOVE the sealed edge and keeps pressing down with atmospheric pressure. The trapped air's pressure builds exactly enough to balance the water pushing up at the mouth, so no water enters. A dry towel tucked into the glass before dipping stays dry — the trapped air's final demonstration.

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LONG QUESTIONS — 15 MARKS

English **(5)** Write a story on: The Fox and the Grapes.

OR — Write an application to your school principal for a fee concession.

Urdu **(5)** Urdu — the prose topic text is not legible in the scan.

Scan note: Same honest miss: the official document carries it readable. The syllabus behind it is this site's Urdu units.

Science **(5)** Illustrate the internal structure of a leaf with a diagram and explain its different parts.

OR — Describe the characteristics of the image formed by a convex mirror with the help of diagrams.

Maths **(5)** Two water tanks have 630 litres and 672 litres volume capacity each. Find the volume of the largest pot that fills both tanks exactly.

OR — A square garden has a length of 65 m. A path 3 m wide runs around it on the outside. Find the area of the path.

Method: 'Fills both exactly' = a volume that divides 630 and 672 with zero remainder → HCF. $630 = 2 \cdot 3^2 \cdot 5 \cdot 7$, $672 = 2^5 \cdot 3 \cdot 7$ → HCF $= 2 \cdot 3 \cdot 7 = 42$ litres. Check: $630 = 42 \times 15$ and $672 = 42 \times 16$ ✓ — 15 fills the first, 16 the second.

OR-method: Outer square side $= 65 + 3 + 3 = 71$ m. Path area $= 71^2 - 65^2 = (71 - 65)(71 + 65) = 6 \times 136 = 816$ m². The difference-of-squares factorisation keeps the arithmetic small.

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ANSWER KEY

29 of 30 items keyed — authored and checked by Cadet College Prep. The published BACT paper carries no key.

Q1. (c) — Ibne Sina (Avicenna), the physician-philosopher students meet in general-knowledge sections, was born near Bukhara in 980. Two of the distractors are other historical cities — memorise the pairing, not just the name.

Q2. (d) — A noun you can see or touch is concrete; beauty and cleanliness are qualities of it, so they are abstract nouns — the one option whose definition fits.

Q3. (b) — Ox pluralises with the rare -en ending — the same small family as children, men and feet. Irregular plurals cannot be built by rule, which is exactly why papers test them.

Q4. (c) — Give takes the recipient with to: 'gave a gift to me'. For me would mean on my behalf, which changes the meaning — a preposition trap, not a tense one.

Q5. (c) — Water is uncountable, so many and too many are out on grammar; of the remaining choices, enough is the one that makes the sentence natural and complete.

Q6. (b) — Adjective describes a noun; adverb describes a verb, adjective or adverb; conjunction joins; pronoun replaces. Four definitions — match each to its job instead of memorising one.

Q7. (b) — The because-clause states a live current cause, so the crying is happening now: present continuous is crying. Was crying and has been crying belong to past and finished frames the sentence never enters.

Q8. (a) — Present simple converts to the simple passive: is/are + past participle. Is being played smuggles in the progressive, was played shifts the tense — the passive keeps the original tense exactly.

Q9. (c) — Did absorbs the past, so the main verb returns to its base form: did not begin. Three of the four options leave the past ending on the second verb — that is the whole trap.

Q10. (b) — The pattern has been + V-ing with a for-duration is the present perfect continuous. Spot the three signals — has been, the -ing, and for — and the tense names itself.

Q21. (c) — A set is infinite when its members cannot be exhausted by counting. Every listed set has a last element — the real numbers do not, so option c is the definition, not a coined fact.

Q22. (b) — Last digit 0 means divisible by 10, hence by 5. Rule out the rest in one move each: digit sum 1+2+1+3+0 = 7 rules out 3 (and 6); last two digits 30 are not a multiple of 4.

Q23. (b) — Subtracting a negative is adding its positive: −6 − (−13) = −6 + 13 = 7. The −19 trap flips the operation and keeps the magnitude-difference wrong direction.

Q24. (b) — Order of operations inside the bracket first: 6 ÷ 2 = 3, so the bracket is 6 − 3 = 3, and 8 − 3 = 5. Every wrong option corresponds to solving at the wrong stage — a clean way to self-diagnose.

Q25. — see scan note — — FLAG — kept visible, not guessed. As printed, the list is 5, 10, 14, whose second element is 10 — but 10 is not among the options, so the published item is internally inconsistent (a digit was lost somewhere between paper and scan). We do not manufacture a 'right' answer from a broken print. Where this item tests a real skill — reading a position in a sequence — the method is: element 1 is the first listed number, element 2 the next.

Q26. (d) — A 20% profit multiplies the cost price by 1.2, so divide back: 48 ÷ 1.2 = 40. Fast check: 20% of 40 is 8, and 40 + 8 = 48 — run it backwards the moment you have a candidate.

Q27. (b) — Read the operations in the order the words fix them: x multiplied by two first (2x), three more than that second. 3(x + 2) is the trap of adding the 3 inside the multiplication instead of after it.

Q28. (c) — Two rays sharing one end point make an angle; the shared point itself is the vertex. The question asks for the point, not the figure — read what the stem names.

Q29. (b) — Area covers length × width — two directions measured — so it is a two-dimensional measure. Perimeter is one (around a line), volume three. The dimension count is just how many quantities you multiply.

Q30. (b) — A cuboid has 6 faces, 12 edges and 8 vertices where three edges meet. Lock the trio together — papers rotate the question among the three counts.

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Q31. (b) — Cell wall, chloroplast and one big central vacuole are the plant cell's signature parts; the centriole is the animal-cell structure in the list. Plant-vs-animal is a two-column recall — learn the columns, not isolated parts.

Q32. (b) — The three smallest bones in the body — malleus, incus, stapes — sit in the middle ear, carrying vibration to the inner ear where hearing happens. The inner ear is fluid and nerves, no bones.

Q33. (d) — Photosynthesis takes in carbon dioxide and water and releases oxygen — oxygen is the OUTPUT, which makes it the trap. Fix the direction: CO_2 in, O_2 out.

Q34. (a) — Producers make their own food from sunlight; that is plants. Fungi and bacteria are decomposers, animals consumers — know what each link in the chain is called and the whole question collapses.

Q35. (a) — Calcium carbonate is the white powder behind lime whitewash — the use in this course's material. Fuel and food are naturals-to-say but belong to other compounds entirely.

Q36. (d) — Air is roughly 78% nitrogen, 21% oxygen (20.9% is the trap wearing a decimal), 0.9% argon and 0.03% CO_2 — know the whole composition, not just the top slot.

Q37. (b) — The anther makes and holds the pollen; the ovary is where seeds form after fertilisation. Petals attract, sepals protect — every flower part has one job.

Q38. (a) — Motion is kinetic — from the Greek for movement. Potential energy is stored (height, wound spring), the other two name energy sources, not states of motion.

Q39. (b) — Wheel and axle means a larger circle turning a smaller one on a shared axis — the screwdriver's handle turns its shaft. Bottle opener and hammer are levers; a knife is a wedge. Classifying the machine first kills the guesswork.

Q40. (a) — Light passing through is transmission; soaking in is absorption; bouncing off is reflection. Three fates of light — match each verb to its behaviour and the options separate cleanly.

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