BITSAT English Proficiency & Logical Reasoning — Sample Paper 16

Duration: 45 Minutes **Maximum Marks: 90**

Instructions

- This paper contains **30** Multiple Choice Questions: **English Proficiency** (Q1–Q10) and **Logical Reasoning** (Q11–Q30).
- Each correct answer carries **+3 marks**. Each incorrect answer carries **−1** mark. Unattempted questions carry **0** marks.
- Only **one** option is correct. Choose carefully.

English Proficiency

Q1. Choose the word **most similar in meaning** to the underlined word:

"The detective found the enigmatic message in the old letter impossible to decode."

(A) Mysterious

(B) Clear

(C) Simple

(D) Familiar

Q2. Choose the word **most opposite in meaning** to the underlined word:

"The indolent student spent the entire afternoon napping instead of studying."

(A) Lazy

(B) Slow

(C) Industrious

(D) Careless

Q3. Choose the best word to complete the analogy:

WORDS : DICTIONARY :: MAPS : ?

(A) Compass

(B) Atlas

(C) Globe

(D) Chart

Q4. Choose the word that **best fills the blank**:

"The company's _____ approach to problem-solving helped it stay ahead of all its competitors."

(A) Outdated

(B) Rigid

(C) Conventional

(D) Innovative

Q5. Choose the word that **best fills the blank**:

"Her _____ nature led her to donate a large part of her earnings to charities every year."

(A) Altruistic

(B) Selfish

(C) Indifferent

(D) Greedy

Q6. Identify the part (A), (B), (C), or (D) that contains a **grammatical error**:

(A) Every student (B) must submit (C) their assignment (D) before Friday.

(A) Every student

(B) must submit

(C) their assignment

(D) before Friday

Q7. Choose the sentence that is **grammatically correct**:

(A) Scarcely he had spoken when the crowd started cheering loudly.

(B) Scarcely had he spoken when the crowd started cheering loudly.

(C) He scarcely has spoken and the crowd started cheering loudly.

(D) He had scarcely spoke when the crowd started to cheer loudly.

Q8. Arrange sentences **P, Q, R, S** in the correct logical order:

P: After months of training, she finally crossed the finish line first.

Q: She signed up for the city marathon without telling her family.

R: Tears of joy streamed down her face as the crowd erupted.

S: Every morning she woke at five to run ten kilometres.

(A) QSPR

(B) SQPR

(C) QPSR

(D) SRQP

***Questions 9 and 10** are based on the following passage.*

The story of human progress is, at its core, a story of curiosity and determination. From ancient astronomers charting the stars to modern scientists mapping the human genome, each generation has built upon the discoveries of those before it. Failures and setbacks are an inevitable part of this journey, but they rarely mark the end. Instead, they often serve as the foundation for the breakthroughs that follow.

Q9. According to the passage, failures and setbacks in the journey of human progress:

(A) Always mark the end of progress

(B) Are avoidable with proper planning

(C) Often serve as the foundation for future breakthroughs

(D) Discourage the next generation

Q10. According to the passage, human progress is primarily driven by:

(A) Technology and funding

(B) Curiosity and determination

(C) Government support

(D) Competition between nations

Logical Reasoning

Q11. Choose the best option to complete the analogy:

MUSICIAN : SCORE :: POET : ?

(A) Poem

(B) Lyrics

(C) Rhyme

(D) Verse

Q12. Choose the best option to complete the analogy:

PRISON : CRIMINAL :: HOSPITAL : ?

(A) Patient

(B) Doctor

(C) Nurse

(D) Medicine

Q13. Choose the best option to complete the analogy:

SUN : ENERGY :: RIVER : ?

(A) Fish

(B) Sand

(C) Water

(D) Flow

Q14. Find the **next number** in the series:

$2,\ 3,\ 5,\ 7,\ 11,\ 13,\ ?$

(A) 15

(B) 17

(C) 19

(D) 21

Q15. Find the **next term** in the series:

$ZA,\ YB,\ XC,\ WD,\ ?$

(A) UV

(B) VD

(C) UE

(D) VE

Q16. Find the **next number** in the series:

$3,\ 6,\ 12,\ 24,\ 48,\ ?$

(A) 96

(B) 84

(C) 90

(D) 100

Q17. In a certain code, **CUP** is written as **FXS**. Using the same rule, what is the code for **PAN**?

(A) SCQ

(B) SDQ

(C) SDP

(D) SEQ

Q18. In a certain code, **EGG** is written as **HJJ**. Using the same rule, what is the code for **MILK**?

(A) PLOM

(B) PLMN

(C) PMON

(D) PLON

Q19. A is B's sister. C is B's mother. D is C's father. How is A related to D?

(A) Daughter

(B) Niece

(C) Granddaughter

(D) Great-granddaughter

Q20. Pointing to a boy, a girl says, "He is the son of my father's wife." How is the boy related to the girl?

(A) Cousin

(B) Nephew

(C) Uncle

(D) Brother

Q21. A person starts from point X, walks **3 km South**, then **4 km East**. What is the shortest distance from point X?

(A) 5 km

(B) 6 km

(C) 7 km

(D) 4 km

Q22. If **South** is to your left, in which direction are you facing?

(A) East

(B) West

(C) North

(D) South

Q23. **Statements:**

All birds have wings.

Some birds are penguins.

Conclusions:

I. Some penguins have wings.

II. All penguins have wings.

Which conclusion(s) follow?

(A) Both I and II

(B) Only II

(C) Neither

(D) Only I

Q24. **Statements:**

No plastic is glass.

All glass is transparent.

Conclusions:

I. No plastic is transparent.

II. Some transparent things are glass.

Which conclusion(s) follow?

(A) Both I and II

(B) Only I

(C) Only II

(D) Neither

Q25. Choose the **odd one out**:

Oak Pine Rose Neem Mango

(A) Rose

(B) Oak

(C) Neem

(D) Pine

Q26. Choose the **number that does not belong** in the group:

6 10 14 18 21 22

(A) 18

(B) 21

(C) 22

(D) 14

Q27. Study the pattern and find the value of '**?**'.

6	**3**	**2**
8	**4**	**2**
12	**4**	**?**

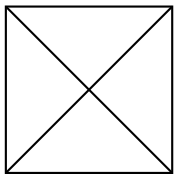
(A) 2

(B) 4

(C) 8

(D) 3

Q28. How many **triangles** (of all sizes) are present in the figure below?



(A) 4

(B) 6

(C) 8

(D) 10

Q29. In a row of **8 students**, P is **3rd from the left** and Q is **3rd from the right**. How many students stand **between** P and Q?

(A) 1

(B) 2

(C) 3

(D) 4

Q30. In a class of **40 students**, Priya ranks **15th from the top**. What is her rank **from the bottom**?

(A) 26

(B) 25

(C) 27

(D) 24

Detailed Solutions

Q1.

Solution

Synonym of ENIGMATIC: *Enigmatic* means difficult to understand; mysterious and puzzling.

- (A) **Mysterious** — direct synonym. **Correct.**
- (B) Clear / (C) Simple / (D) Familiar — all antonyms in sense.

Synonyms: *Mysterious, puzzling, cryptic, inscrutable, baffling.* **Final Answer:** Mysterious ⇒ A

Answer: (A) Go Back to Q1

Q2.

Solution

Antonym of INDOLENT: *Indolent* means habitually lazy and avoiding effort.

- (A) Lazy — synonym.
- (C) **Industrious** — means hard-working and diligent; direct antonym. **Correct.**

Antonyms: *Industrious, diligent, hardworking, energetic.* **Final Answer:** Industrious ⇒ C

Answer: (C) Go Back to Q2

Q3.

Solution

Analogy — Collection: WORDS : DICTIONARY — a dictionary is a collection of words. MAPS : ATLAS — an atlas is a collection of maps.

- (B) **Atlas** — a book of maps; perfect parallel. **Correct.**
- Others are navigation tools or individual map types, not collections.

Final Answer: Atlas ⇒ B

Answer: (B) Go Back to Q3

Q4.

Solution

Fill in the Blank: "Stay ahead of all its competitors" requires a forward-thinking, creative approach.

- (D) **Innovative** — means introducing new ideas; perfect fit. **Correct.**
- Others (outdated, rigid, conventional) describe approaches that would *fall behind* competitors.

Final Answer: Innovative $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Fill in the Blank: "Donate a large part of her earnings to charities" is selfless giving, not self-interested.

- (A) **Altruistic** — means showing selfless concern for the well-being of others. **Correct.**
- Others (selfish, indifferent, greedy) contradict charitable giving.

Synonyms: *Selfless, philanthropic, generous, benevolent.* **Final Answer:** Altruistic $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

Grammar: Pronoun Agreement with Singular Subjects: "Every student must submit **their** assignment." The subject *every student* is grammatically singular. Strictly, the pronoun should be **his/her** (singular). Using "their" with a singular subject is an error in formal grammar.

- (C) **"their assignment"** — should be "his or her assignment" (formal rule). **Error here.**

Note: In contemporary usage, singular "they" is widely accepted, but in BITSAT grammar questions, the traditional rule applies: *every/each/anyone/everyone* $\rightarrow$ singular pronoun. **Final Answer:** Part (C) $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q6

Q7.

Solution

Grammar: "Scarcely. . . when" with Inversion:

- (A) "Scarcely he had spoken" — wrong word order; negative adverb at start requires subject-verb inversion.
- (B) **"Scarcely had he spoken when the crowd started cheering."** — Correct inversion (had + subject + past participle). **Correct.**
- (C) "has spoken" — wrong tense; should be past perfect.
- (D) "scarcely spoke" — wrong form; should be "had. . . spoken" (past participle, not simple past).

Rule: *Scarcely/Hardly/No sooner* at the start of a sentence requires **inversion** of subject and auxiliary verb. **Final Answer:** Option (B) $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q7

Q8.

Solution

Sentence Arrangement: Marathon Story: Q: She signed up (the decision, starting point). $\rightarrow$ S: She trained every morning (daily preparation). $\rightarrow$ P: She crossed the finish line first (the achievement). $\rightarrow$ R: Tears of joy (the emotional conclusion). Sequence: **QSPR**. **Final Answer:** QSPR $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q8

Q9.

Solution

RC Factual Retrieval: "Failures and setbacks. . . often serve as the **foundation for the breakthroughs that follow**."

- (C) **Often serve as the foundation for future breakthroughs** — direct match. **Correct.**

Final Answer: $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q9

Q10.

Solution

RC: Main Driving Force: First sentence: "a story of **curiosity and determination**."

- (B) **Curiosity and determination** — central theme stated in the opening. **Correct.**

Final Answer: Curiosity and determination ⇒ B

Answer: (B) Go Back to Q10

Q11.

Solution

Analogy — Professional Work Product: MUSICIAN : SCORE — a musician reads/follows a musical score (the written notation of a composition). POET : VERSE — the primary unit/product of a poet's work is a verse.

- (D) **Verse** — lines of poetry; the poet's specific written output. **Correct.**
- (A) Poem — too broad; a poem contains multiple verses.

Final Answer: Verse ⇒ D

Answer: (D) Go Back to Q11

Q12.

Solution

Analogy — Institution and Occupant: PRISON : CRIMINAL — a prison houses criminals. HOSPITAL : PATIENT — a hospital houses patients.

- (A) **Patient** — the occupant/recipient in a hospital. **Correct.**
- Doctor/Nurse are staff, not occupants housed there.

Final Answer: Patient ⇒ A

Answer: (A) Go Back to Q12

Q13.

Solution

Analogy — Natural Source and Its Primary Output: SUN : ENERGY — the sun's primary output/resource is energy (light and heat). RIVER : WATER — a river's primary resource/output is water (it provides and flows with water).

- (C) **Water** — what a river is composed of and provides. **Correct.**

Final Answer: Water $\Rightarrow$ C

Answer: (C) Go Back to Q13

Q14.

Solution

Number Series: Prime Numbers: $2, 3, 5, 7, 11, 13$ are the first six primes. Next prime after 13: **17** ($14{=}2{\times}7$, $15{=}3{\times}5$, $16{=}2^4$, 17 is prime ✓). **Final Answer:** $17 \Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Letter Series: Two Interleaved Sequences: First letters: Z(26), Y(25), X(24), W(23), V(22) — descending.
Second letters: A(1), B(2), C(3), D(4), E(5) — ascending.
Next pair: V + E = **VE. Final Answer:** VE $\Rightarrow$ D

Answer: (D) Go Back to Q15

Q16.

Solution

Number Series: ×2 Pattern: $3 \times 2 = 6$, $6 \times 2 = 12$, $12 \times 2 = 24$, $24 \times 2 = 48$, $48 \times 2 = 96$. **Final Answer:** $96 \Rightarrow$ A

Answer: (A) Go Back to Q16

Q17.

Solution

Coding: +3 Shift — Apply to PAN: Verify: C(3)→F(6), U(21)→X(24), P(16)→S(19) = FXS ✓
PAN: P(16)→S(19), A(1)→D(4), N(14)→Q(17) = **SDQ**. **Final Answer:** SDQ ⇒ B

Answer: (B) Go Back to Q17

Q18.

Solution

Coding: +3 Shift — Apply to MILK: Verify: E(5)→H(8), G(7)→J(10), G(7)→J(10) = HJJ ✓
MILK: M(13)→P(16), I(9)→L(12), L(12)→O(15), K(11)→N(14) = **PLON**. **Final Answer:** PLON ⇒ D

Answer: (D) Go Back to Q18

Q19.

Solution

Blood Relations: Chain Tracing: A is B's sister ⇒ A and B are siblings.
C is B's mother ⇒ C is also A's mother.
D is C's father ⇒ D is A's **maternal grandfather**.
How is A related to D? A is D's **granddaughter**. **Final Answer:** Granddaughter ⇒ C

Answer: (C) Go Back to Q19

Q20.

Solution

Blood Relations: "My father's wife" = the girl's **mother**. Son of the girl's mother = the girl's **brother**. **Final Answer:** Brother ⇒ D

Answer: (D) Go Back to Q20

Q21.

Solution

Direction: Pythagoras (3-4-5 Triple): $(0,0) \xrightarrow{3S} (0,-3) \xrightarrow{4E} (4,-3)$. Shortest distance $= \sqrt{3^2+4^2} = \sqrt{9+16} = \sqrt{25} = 5$ km. (The 3-4-5 Pythagorean triple.)

Final Answer: 5 km $\Rightarrow$ A

Answer: (A) Go Back to Q21

Q22.

Solution

Direction: Left-Side Reasoning: If South is to your left, then: **facing West** (when facing West: left = South, right = North, front = West, back = East). ✓
Quick check: Face North $\rightarrow$ left is West. Face East $\rightarrow$ left is North. Face South $\rightarrow$ left is East. Face **West** $\rightarrow$ left is **South**. ✓**Final Answer:** West $\Rightarrow$ B

Answer: (B) Go Back to Q22

Q23.

Solution

Syllogism: "Some birds are penguins" (Particular Affirmative): Conclusion I:

"Some penguins have wings." Some birds are penguins $\Rightarrow$ those penguins are birds. All birds have wings $\Rightarrow$ those penguins have wings. **Follows.** ✓

Conclusion II: "All penguins have wings." We only know *some* birds are penguins. We don't know all penguins are birds from these premises (the statement says "some birds are penguins", not "all penguins are birds"). **Does NOT follow.**

Only I follows $\Rightarrow$ **D. Final Answer:** Only I $\Rightarrow$ D

Answer: (D) Go Back to Q23

Q24.

Solution

Syllogism: Conclusion I: "No plastic is transparent." We know no plastic is glass and all glass is transparent. But transparent things are not exclusively glass — plastic could be transparent through other means. I does **not** follow.

Conclusion II: "Some transparent things are glass." All glass is transparent $\Rightarrow$ by conversion: some transparent things are glass. **Follows.** ✓

Only II follows $\Rightarrow$ **C. Final Answer:** Only II $\Rightarrow$ C

Answer: (C) Go Back to Q24

Q25.

Solution

Odd One Out: Trees vs Flowering Shrubs:

- Oak, Pine, Neem, Mango — all trees (woody plants with a single main trunk).
- **Rose** — a thorny flowering shrub; not classified as a tree. **Odd one out.**

Final Answer: Rose $\Rightarrow$ A

Answer: (A) Go Back to Q25

Q26.

Solution

Odd One Out: Even Numbers: 6, 10, 14, 18, 22 are all **even** numbers. **21** is **odd**. 21 is the odd one out. **Final Answer:** 21 $\Rightarrow$ B

Answer: (B) Go Back to Q26

Q27.

Solution

Number Matrix: Col 1 $\div$ Col 2 = Col 3: Row 1: $6 \div 3 = 2$ ✓ Row 2: $8 \div 4 = 2$ ✓ Row 3: $12 \div 4 = \mathbf{3}$. **Final Answer:** 3 $\Rightarrow$ D

Answer: (D) Go Back to Q27

Q28.

Solution

Counting Triangles: Square with Both Diagonals: The two diagonals of the square divide it into 4 small triangles. Count all triangles:

- **4 small triangles** (each quarter of the square).
- **4 large triangles** (each formed by 2 adjacent small ones): top+right, right+bottom, bottom+left, left+top.

Total: $4 + 4 = 8$. **Final Answer:** 8 $\Rightarrow$ C

Answer: (C) Go Back to Q28

Q29.

Solution

Row Position: Total = 8. P: 3rd from left = position 3. Q: 3rd from right = $8 - 3 + 1 = 6$ from left.
Between positions 3 and 6: positions 4, 5 = **2 students**. **Final Answer:** $2 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q29

Q30.

Solution

Rank from Bottom: Rank from bottom = Total − Rank from top $+1 = 40-15+1 =$ **26**. **Final Answer:** $26 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q30

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	C	3	B	4	D	5	A
6	C	7	B	8	A	9	C	10	B
11	D	12	A	13	C	14	B	15	D
16	A	17	B	18	D	19	C	20	D
21	A	22	B	23	D	24	C	25	A
26	B	27	D	28	C	29	B	30	A