

S@ifur's

IBA MBA

(ভর্তি পরীক্ষার প্রশ্ন ব্যাংক ও সমাধান)

Saifur Rahman Khan

Managing Director, S@ifur's

B.Sc. Engr. (EEE, BUET); MBA,
IUI, Japan.
GMAT-এ record score প্রাপ্ত!
Monbusho Scholar.

Ex-lecturer
IBA, University of Dhaka;
Ex-Faculty Member, BIBM.

Md. Maniruzzaman Manir

Research Associate & Writer

Edition **□ 2026**
Published By **□ S@ifur's Publication**
Copyright © **☞ Saifur Rahman Khan**

[এই বই অথবা বইয়ের কোনো অংশ pdf করে বিক্রি করা বা free সরবরাহ করা আইনত দণ্ডনীয়]

Distributor

18/2, জয়চন্দ্র ঘোষ লেন (শহীদ ময়েজউদ্দিন রোড ক্রিসেন্ট হাসপাতালের সামনে)

প্যারিদাস রোড, বাংলাবাজার, ঢাকা।

মোবাইল: 01713 43 20 15; 01613 43 20 16

কুরিয়ারে সাইফুর'স এর যেকোনো বই পেতে

01713 43 20 15; 01613 43 20 16



(10 am to 5 pm)

ISBN Number: 978-984-99272-5-9

Compose & Design:

মো. আল-মামুন ফেরদৌস, আব্দুল কুদ্দুস শেখ

Price: Tk. 550 (Fixed)

ফ্রি ক্লাস করার জন্য join:

@ SaifursEducation

@ SaifursStudyClub

@ SaifurSir

@ SaifursPublications



Mobile Teacher Service

এ বইয়ের কোন প্রশ্নের উত্তর নিয়ে সন্দেহ বা পরামর্শ থাকলে

বইয়ের নাম-সালসহ পৃষ্ঠা ও প্রশ্ন নম্বর উল্লেখ করে

S@ifur's-এর মোবাইল স্যারকে SMS করুন:

01613 43 21 27

IBA MBA (DU) Admission

ভর্তি পরীক্ষা বছরে ১ বার হয় - নভেম্বর/ডিসেম্বরে।

Applicant Eligibility (আবেদনকারীর যোগ্যতা)

Required Academic Qualifications:

- Minimum 4 year bachelor's degree, of 3 years bachelor's & 1 year master degree, in any discipline with a minimum CGPA of 2.50 out of 4.00 or (2nd Class)
- Minimum GPA of 3.00 out 5.00 (or 2nd division) in both SSC and HSC exams separately.
- Minimum GPA of 2.00 in both O level and A level separately. For details, please visit www.mba.iba-du.edu
- No 3rd division/class at SSC/HSC/bachelor's level of education.
- In order to be eligible for the test, an applicant must obtain published official result of his/her bachelor's degree before last date of submission of application for the respective year.

ভর্তি পরীক্ষায় কী কী থাকবে

1. Written Test

The Written test component evaluates applicant's aptitude in English Language & Communication, Mathematics, and Analytical ability (ইংরেজি, অংক ও অ্যানালাইটিক্যাল-এর উপর পরীক্ষা হবে). An applicant must obtain a minimum score in each of the above areas to pass the written test. { প্রতি বিষয়ে অবশ্যই পাস মার্কস ($\pm 40\%$) পেতে হবে }

2. Interview

After qualifying in the written test, short listed applicants must appear before interview board.

Final Selection & Registration

The final selection for admission will be based on scores obtained by an applicant in the Written Test and the Communication Test.

Foreign Applicants:

- An applicant with foreign nationality and foreign university degree(s) may be exempted from taking the written test if s/he has GMAT/GRE score of minimum 75 percentile. However, s/he is required to appear before and interview board.
- For all foreign certificate/digress (excluding O Level and A Level), equivalence will be determined by Equivalence Committee o IBA. Without such equivalence, the applicant will not be eligible to apply for the admission test.

JOB holder-দের জন্য সুখবর

নতুন একটি **MBA** চালু আছে **IBA**-তে যার নাম
Executive MBA or EMBA

এটার ভর্তি পরীক্ষা বছরে তিনবার হয় - Fall, Spring, এবং Summer ।

Applicant Eligibility

Job Experience:

Minimum **5 years of full time work experience** in executive/grade-9 level or above (in case of public sector employments) after bachelor's degree.

Academic Qualifications:

- Minimum 4 years of university education after HSC or equivalence (including bachelor's degree) in discipline with **minimum CGPA of 2.5 out of 4.00 or 2nd class**
- Minimum GPA of 3:00 out of 5.00 (or 2nd division) in both SSC and HSC exams separately.
- No 3rd Class division/class at SSC/HSC bachelor's Level of education
- Minimum GPA of 2.00 in both O level and A level exams separately. For details, please visit www.iba-du.edu

Admission Test (ভর্তি পরীক্ষা)

Applicants will be required to sit for an admission test, which is administered by IBA in Dhaka. The Admission Test will evaluate the applicant's aptitude in the following two areas:

- i) Analytical ability
- ii) Language and Communication

To qualify in the Admission Test an applicant must obtain minimum qualifying marks in each area {প্রতি বিষয়ে পাস মার্কস ($\pm 40\%$) পেতে হবে}.

Exemption for GMAT

Applicants with foreign nationality and degree (s) having a valid GMAT score of minimum 75 percentiles may be exempted from the written test. However, s/he is required to appear before the interview board.

Interview

Applicants will be selected for interview on the basis of their performance in the Admission Test.

ক্লাসের দেড় ঘণ্টা নয়

আপনি হয়ত শনি, সোম, বুধ MBA কোচিং করছেন এবং রবি, মঙ্গল, বৃহস্পতি Writing করছেন, কিন্তু

ক্লাসের দেড় ঘণ্টা নয় বরং বাসার ২২ ঘণ্টা আপনি কীভাবে ব্যয় করেন, সেটার উপরই নির্ভর করবে

আপনি পরীক্ষায় কেমন করবেন। খেয়াল রাখতে হবে যে কোচিং ক্লাসের $1\frac{1}{2}$ বা ২ ঘণ্টা সময় আপনার

তখনই কাজে লাগবে, যখন আপনি দিনের বাকি ২২ ঘণ্টা সময় বাসাতে/মেসে/হলে নিজে নিজে নির্দিষ্ট রুটিন অনুযায়ী daily কমপক্ষে ৭/৮ ঘণ্টা personal study করবেন। তাই আগামী ৫/৬ মাসের জন্য উপরের মত করে একটি রুটিন বানিয়ে নিন।

কোচিং ক্লাস হলো ডাক্তারের Prescription-এর মত।

শুধু Prescription দিয়ে যেমন রোগ সারে না, তেমনি শুধু দেড় ঘণ্টা ক্লাস করে পরীক্ষায় ভালো করা অসম্ভব - এটার গ্যারান্টিও আমরা এখনই লিখিত আপনাকে দিচ্ছি।

Table of Contents

01. DU, IBA MBA Admission Test, 2000 – 2001	01
→ সমাধান	17
02. DU, IBA MBA Admission Test, 2001 – 2002	31
→ সমাধান	43
03. DU, IBA MBA Admission Test, 2002 – 2003	51
→ সমাধান	65
04. DU, IBA MBA Admission Test, 2003 – 2004	75
→ সমাধান	87
05. DU, IBA MBA Admission Test, 2004 – 2005	95
→ সমাধান	112
06. DU, IBA MBA Admission Test, 2005 – 2006	124
→ সমাধান	138
07. DU, IBA MBA Admission Test, 2007 – 2008	145
→ সমাধান	157
08. DU, IBA MBA Admission Test, 2008 – 2009	172
→ সমাধান	185
09. DU, IBA MBA Admission Test, 2009 – 2010	199
→ সমাধান	216
10. DU, IBA MBA Admission Test, 2010 - 2011	227
→ সমাধান	240
11. DU, IBA MBA Admission Test, June 2011	252
→ সমাধান	262
12. DU, IBA MBA Admission Test, December 2011	272
→ সমাধান	282
13. DU, IBA MBA Admission Test, June 2012	296
→ সমাধান	307
14. DU, IBA MBA Admission Test, December 2012	331
→ সমাধান	341
15. DU, IBA MBA Admission Test, June 2013	359
→ সমাধান	369
16. DU, IBA MBA Admission Test, November 2014	391
→ সমাধান	403

17. DU, IBA MBA Admission Test, June 2015	421
→ সমাধান	431
18. DU, IBA MBA Admission Test, December 2015	449
→ সমাধান	459
19. DU, IBA MBA Admission Test, July 2016	478
→ সমাধান	489
20. DU, IBA MBA Admission Test, December 2016	510
→ সমাধান	521
21. DU, IBA MBA Admission Test, June 2017	533
→ সমাধান	544
22. DU, IBA MBA Admission Test, December 2017	554
→ সমাধান	566
23. DU, IBA MBA Admission Test, May 2018	581
→ সমাধান	592
24. DU, IBA MBA Admission Test, December 2019	697
→ সমাধান	700
25. DU, IBA MBA Admission Test, December 2020	706
→ সমাধান	712
26. DU, IBA MBA Admission Test, December 2021	720
→ সমাধান	723

DU, IBA Executive MBA Admission Test

27. DU, IBA Executive MBA Admission Test, 2008	618
→ সমাধান	624
28. DU, IBA Executive MBA Admission Test, February, 2009	633
→ সমাধান	659
29. DU, IBA Executive MBA Admission Test, December, 2009	642
→ সমাধান	647
30. DU, IBA Executive MBA Admission Test, August, 2010	653
→ সমাধান	658
31. DU, IBA Executive MBA Admission Test, April, 2010	662
→ উত্তর	666
32. DU, IBA Executive MBA Admission Test, August, 2011	668
→ সমাধান	673
33. DU, IBA Executive MBA Admission Test, Spring, 2016	675
→ সমাধান	681
34. DU, IBA Executive MBA Admission Test, Fall, 2017	685
→ সমাধান	688
35. DU, IBA Executive MBA Admission Test, Summer, 2017	691
→ সমাধান	694

DU IBA
MBA

Admission Test

2000 - 2001

30 questions	Section I: Mathematics	30 marks
---------------------	-------------------------------	-----------------

Directions: Solve each of the following problems and mark the correct answer on your Answer Sheet. **DO NOT USE A CALCULATOR.** Figures are drawn to scale.

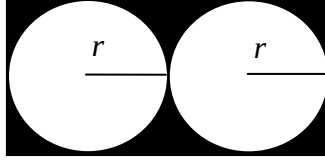
01. If $A = \frac{2}{3} B$, $B = \frac{2}{3} C$, and $C = \frac{2}{3} D$, what part of D is B?
 (A) $\frac{8}{27}$ (B) $\frac{4}{9}$ (C) $\frac{2}{3}$ (D) 75% (E) $\frac{4}{3}$
02. A picture measuring 16cm $\times$ 24cm has a frame 1 cm wide on all sides. About how many times greater than the area of frame is area of the picture?
 (A) 1.2 (B) 4.5 (C) 12 (D) ? (E) 80
03. The price of a front circle seat in a cinema hall is $\frac{1}{3}$ the price of a rear circle seat. The cinema has only these two types of seat. When completely sold out, the total receipts from the 600 rear circle seats and the 450 front circle seats are Tk. 4500. What is the price of one rear circle seat?
 (A) Tk. 2.00 (B) Tk. 2.30 (C) Tk. 4.00 (D) Tk. 6.00 (E) Tk. 10.00
04. In triangle ABC, $AB = AC$, All of the following statements are true except
 (A) $AB < AC + BC$ (B) $AC < AB + BC$ (C) $BC < AB + AC$
 (D) $AC + BC = AB + BC$ (E) $BC + AC > AB + BC$
05. Last year 60 students enrolled in the Business Communication course. Of the enrolled students, 90% took the final exam. Two-thirds of the students who took the final exam passed in final exam. What percentage of the enrolled students did not pass in the exam?
 (A) 40% (B) 45% (C) 60%
 (D) 75% (E) cannot be determined

S@ifur's Math বইয়ের 'Percentage' chapter থেকে এ ধরনের অংক Practice করুন

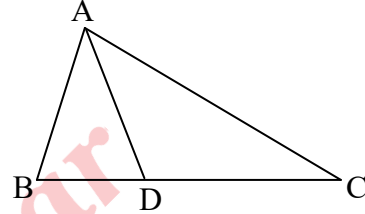
06. At a club, 70% of the members are women and 60% of the members are married. If $\frac{2}{3}$ of the men is single, what fraction of the women is married?
 (A) $\frac{5}{7}$ (B) $\frac{7}{10}$ (C) $\frac{1}{3}$ (D) $\frac{7}{30}$ (E) None

07. The 356 members of Metro Chamber of Commerce will vote to choose a President. With 5 candidates seeking office, what is the least number of votes a successful candidate could receive and yet have more votes than any other candidate?
(A) 71 (B) 72 (C) 89 (D) 178 (E) 179
08. A garments worker is paid d Takas per hour for the first 8 hours she works in a day. For every hour after the first 8 hours, she is paid c Takas per hour. If she works 12 hours in one day, what is her average hourly wage for that day?
(A) $\frac{2d+c}{3}$ (B) $8d+4c$ (C) $\frac{8d+12c}{12}$ (D) $\frac{4d+8c}{12}$ (E) $d + \left(\frac{1}{3}\right)c$
09. Karim received a 10% raise each month for 3 consecutive months. If his salary after the 3 raises is 13310, what his starting salary?
(A) 9000 (B) 10000 (C) 11000 (D) 12000 (E) None
10. By how much is $\frac{3}{7}$ larger than 20% of 2?
(A) $\frac{1}{35}$ (B) $\frac{1}{7}$ (C) $\frac{4}{7}$ (D) $\frac{3.3}{7}$ (E) $\frac{3.4}{7}$
11. Given that x and y are real numbers, let $f(x, y) = x + 2y$ and let $g(x) = x^3 + 3$. Then $f\{5, g(2)\} =$
(A) $3x^3 + 2$ (B) 11 (C) 27 (D) 29 (E) None
12. The greatest common factor of two positive integers is A. The least common multiple of the two integers is B. If one of the integers is C, what is the other number?
(A) $\frac{AB}{C}$ (B) $\frac{BC}{A}$ (C) $\frac{A}{C} + B$ (D) $A + \frac{B}{C}$ (E) None
13. Two years ago, the cost of pen A was Tk. 70 more than that of pen B. But due to high demand, the cost of pen A has increased by 100% and that of pen B has increased by Tk. 20. If today you need a total of Tk. 250 to buy one pen of each type, what was the price in Taka of pen B two years ago?
(A) 30 (B) 40 (C) 50 (D) 70 (E) None
14. There are 200 questions in a 3-hour examination. Among these questions are 50 mathematics problems. It is suggested that twice as much time be allowed for each mathematics problem as for the other questions. How many minutes should be spent on the mathematics problems?
(A) 36 (B) 60 (C) 72 (D) 100 (E) 120
15. The size of the smaller angle between the hands of the clock at half past six, expressed in degrees, is
(A) 7.5° (B) 15° (C) 22.5° (D) 30°
(E) more than $22\frac{1}{2}^\circ$ but less than 30°

16. Referring to the figure below, the area of the shaded portion is



- (A) $2r^2(\pi - 2)$ (B) $2r^2(2 - \pi)$ (C) $2r^2(\pi - 4)$ (D) ? (E) $r^2(2 - \pi)$
17. Referring to the figure below, $\angle BAC = 90^\circ$ and D is the midpoint of BC. If BC = 10 cm, what is the value of AD in cm?



- (A) 3 (B) 4 (C) 5 (D) $5\sqrt{2}$ (E) None
18. A boy purchased some chocolates from a shop for Tk. 120. In the next shop he found that the price per piece of chocolate is Tk. 3 less than that charged at the previous shop, and as such he could have purchased 2 more chocolates. How many chocolates did he buy from the first shop?
- (A) 7 (B) 8 (C) 9 (D) 10 (E) None
19. In a survey of Chittagong City, it was found that 70% of the people surveyed watched television news, 35% read a newspaper, and 25% read a newspaper and watched television news. What percent of the people surveyed neither watched television news nor read a newspaper?
- (A) 30% (B) 20% (C) 0% (D) 15% (E) 5%
20. A triangular plot with sides 28 meters, 35 meters, & 56 meters is to be surrounded by a fence built on posts set 7 meters apart. After posts are placed at each corner, how many more additional posts will be needed?
- (A) 14 (B) 15 (C) 16 (D) 17 (E) 20

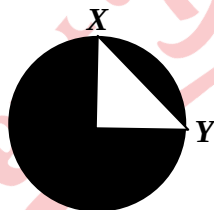
Questions 21 - 24 refer to the following chart

Ten largest cities in Bangladesh

District	Rank in	Population (millions)		Rank in
Year	1960	1960	1950	1950
Dhaka	1	7.71	7.89	1
Chittagong	2	3.49	3.62	2
Rajshahi	3	2.45	1.97	4
Khulna	4	1.96	2.07	3
Sylhet	5	1.67	1.85	5

District	Rank in	Population (millions)		Rank
Year	1960	1960	1950	1950
Bogra	6	0.93	0.60	14
Jamalpur	7	0.92	0.95	6
Faridpur	8	0.87	0.91	7
Feni	9	0.75	0.80	9
Barisal	10	0.75	0.86	8

21. Which of the following cities had the largest percentage change in population between 1950 and 1960?
(A) Dhaka (B) Chittagong (C) Rajshahi (D) Bogra (E) Feni
22. If the total Bangladesh population was 86 million in 1950, approximately what percent of the population lived in the 5 largest cities in 1950?
(A) 5% (B) 10% (C) 15% (D) 20% (E) 35%
23. If Sylhet had a population of 1 million in 1940, what was the percentage increase between 1940 & 1960?
(A) 40 (B) 50 (C) 60 (D) 67 (E) 167
24. In 1960, how many times was the population of Khulna larger than that of Feni.
(A) 1.2 (B) 1.5 (C) 2.0 (D) 2.6 (E) 3.2
25. Hasib's weight is 140% of Shawkat's weight. Mowla's weight is 90% of Misha's weight. Misha weighs twice as much as Shawkat. What percent of Hasib's weight is Mowla's weight?
(A) $64\frac{2}{7}$ (B) 90 (C) $77\frac{7}{9}$ (D) $155\frac{5}{9}$ (E) $128\frac{4}{7}$
26. O is the center of the circle at the right. XO is perpendicular to YO and the area of triangle XOY is 32. What is the area of circle O?



- (A) 16π (B) 32π (C) 64π (D) 128π (E) 256π
27. A T-shirt marked Tk. 48 is offered at a discount of 25% during Eid sale. At this reduced price the shopkeeper makes a profit of 20% on the cost. The cost to the shopkeeper is
(A) Tk. 29 (B) Tk. 30 (C) Tk. 32 (D) Tk. 36 (E) Tk. 40
28. Halim, Kalim and Salim invest Tk. 5000, Tk. 7000, and Tk. 12000 respectively in a business. If the profits are distributed proportionately, what share of a Tk. 1111 profit should Salim receive?
(A) Tk. 231.40 (B) Tk. 264.00 (C) Tk. 333.33
(D) Tk. 370.33 (E) Tk. 555.50
29. A bus uses one liter of diesel to travel 15 km. After an engine turn-up, the bus travels 15% faster on one liter. How many liters of diesel (to the nearest tenth) will it take for the bus to travel 150 km after a tune-up?
(A) 8.5 (B) 8.7 (C) 8.9 (D) 9.0 (E) 10.0

30. If $\frac{1}{x} + \frac{1}{y} = 7$ and $\frac{1}{x^2} - \frac{1}{y^2} = 21$, what is the value of x ?

- (A) $\frac{1}{2}$ (B) $\frac{1}{3}$ (C) $\frac{1}{5}$ (D) $\frac{1}{7}$ (E) none

20 questions

Section II: Analytical Ability

1 × 20 marks

Directions: Solve each of the following problems and mark the correct answer on your Answer Sheet.

01. Team plays, like football, display strong socialist tendencies in their requirement of individual subordination to the authority of coaches and managers.
Which of the following may not be inferred from the above information?
(A) All team sports are authoritarian.
(B) All team players are subordinate to their coaches.
(C) All team sports have socialist tendencies.
(D) Individual subordination to authority is an aspect of socialism.
(E) Without employee subordination to managerial authority, production for profit would not be possible
02. Department stores range from two to nine floors in height. If a store has more than three floors, it has a lift. If the statements above are true, which of the following must also be true?
(A) Second floors do not have lifts. (B) Fourth floors have lifts.
(C) Only floors above third floor have lifts.
(D) All floors may be reached by lifts.
(E) Some two-floor departmental stores do not have lifts.
03. Irin is taller than Shahin.
Elias is taller than Haroon.
Haroon is shorter than Gomes.
Shahin and Gomes have the same height.
If the above is true, which of the conditions must also be true?
(A) Elias is taller than Gomes (B) Elias is taller than Irin
(C) Shahin is shorter than Elias (D) Irin is shorter than Haroon
(E) Shahin is taller than Haroon
04. At a political rally in Paltan Maidan, candidate Mr. Rahmat Ali exclaimed, æ.. Nearly everyone at the rally is behind me. It seems I am going to be elected.”
(A) Ali was supported by the City Mayor
(B) People always vote according to their emotion.
(C) Ali has never been defeated in an election
(D) Ali’s opponent also appeared at the rally.
(E) The rally was attended by nearly all the residents in Ali’s constituency.

05. The Greenhouse effect is causing a general warming of the world. Climatologists are predicting that there will be more droughts and more floods. Soil erosion will be an increasing problem in semi-arid lands. However there will be benefits to other areas of the world where agriculture production will increase. An example is Hokkaido, the northern island of Japan, which will experience a temperature rise of 4 degree Celsius within the next 50 years, and it is predicted that this will increase rice production fourfold. In Iceland and Finland, land which is fit for pasture will increase by 50% and yields of hay could increase by 60%.
Based on the above text, which of the following assumption is correct in panning for future food production?
- (A) Pastureland will increase in area.
(B) Desert lands may be flooded.
(C) the climate of northern parts of the world will be unaffected
(D) The greenhouse effect will have a positive effect on certain areas of the world only.
(E) Japan will increase its rice production fourfold.

Questions 6 – 9 are based on the following table.

Budget at a Glance

Taka in billion	Budget 2000-01	Revised budget 1999-2000	Budget 1999-2000
Revenues	241.98	213.45	241.51
Expenditure:			
Current Expenditure	196.33	184.40	178.00
ADP	175.00	165.00	155.00
Internal loan & advance	13.11	-2.47	-4.57
Repayment of foreign Loan	24.80	20.75	18.50
Other capital expenditure	19.35	11.81	14.85
Total Expenditure:	428.59	379.49	361.78
Budget deficit/surplus	-186.61	-166.04	-120.27

06. The forecast budget deficit for 2000 – 01 is what percentage of the deficit in the revised budget of 1999 – 2000?
- (A) 120.5% (B) 110.3% (C) 105.6% (D) 112.4% (E) None

07. Revenue forecast for 2000 – 01 exceeds the 1999 – 2000 original budget by
(A) 2% (B) 5% (C) almost 0% (D) – 3% (E) – 5%
08. Current expenditure in the revised budget for 1999 – 2000 was lower comparative to 2000 – 01 by
(A) 6.08% (B) 8.08% (C) 9.08% (D) 5.08% (E) None
09. The ADP increase in 2000 – 01 over the 1999 – 2000 original budget was the following multiple of Taka 5 billion
(A) 2 (B) 3 (C) 4 (D) 5 (E) None
10. Dolly has just passed her 108th birthday. She thinks she lived long years due to her habit of drinking a double shot of whiskey each night and smoking there cigars each morning. Which of the following statements contradict the thinking of Dolly?
(A) Smoking has been proved to be a causative factor in several life threatening diseases.
(B) Other factors besides those mentioned may have caused her to live 108 years.
(C) Not all centenarians drink alcohol and smoke tobacco.
(D) Dolly should not be consuming the substances mentioned without medical advice.
(E) Alcohol has been shown to kill brain cells.
11. Mila and Nila agreed to embroider a shirt. Mila alone completed one-third of the job and then asked Nila to complete the rest. Nila asked Riva and the two of them equally shared the job. Which of the following statements is true?
(A) Nila did more than Mila
(B) Nila did as much as Mila and Riva did individually
(C) Nila did more than Riva.
(D) Nila did as much as Mila and Riva did together
(E) None of the above
12. M, N, P, Q, and R are positioned in clockwise order around a circular table. R makes a clockwise move jumping over three positions and Q makes a counter-clockwise move also jumping over three positions. What would be the new position in clockwise order?
(A) NPQMR (B) RQPMN (C) MNPRQ (D) Same as before (E) None
13. The total population of seven districts of Dhaka Division is greater than the total population of eight districts of Rajshahi Division. What can we say if one of the districts is dropped from Dhaka Division?
(A) The total population of the six districts in Dhaka Division will still be greater than that of the eight districts of Rajshahi Division.
(B) The total population of the eight districts in Rajshahi Division will be greater than of the six districts of Dhaka Division.
(C) The total population of the eight districts in Rajshahi Division will be equal to that of the six districts of Dhaka Division.
(D) We cannot say anything conclusively.
(E) None of the above.

Questions 14 -16 are based on the following.

Strict gun control laws cause a decrease in violent crimes; in the six months since the city council passed a gun control law, armed robbers in City X have dropped by 18 percent.

14. Which of the following statements, if true, would weaken the argument above?
- (I) In the six months the law was passed, 40 percent more police have been recruited.
 - (II) In the six months since the law was passed, accidental deaths by firearms have increased by 10%
 - (III) Only 30% of those indicted under the law have been convicted.
- (A) I only (B) III only (C) I and II only
(D) I and III only (E) II and III only
15. All of the following if true, are valid objections to the arguments above EXCEPT:
- (A) A decrease in crime in one city does not mean that such a decrease would occur anywhere a gun control law enacted.
 - (B) Other factors may have caused the drop in armed robberies.
 - (C) Armed robbery is only one kind of violent crime that might be affected by a gun control law.
 - (D) The gun control law has made it more difficult for citizens to purchase guns for legitimate purpose of self-defense.
 - (E) Since the law was passed, murders involving guns in City X have increased by 22 percent.
16. Which of the following statements, if true, would strengthen the argument above?
- (I) Before the law was passed, the number of armed robberies had been steadily increasing.
 - (II) The more that laws are used to prevent a crime, the less likely that crime is to occur.
 - (III) Three-fourths of all violent crimes involve the use of a gun.
- (A) I only (B) III only (C) I and II only (D) II and III only (E) I, II, & III

Questions 17 - 20 are based on the following passage.

In a certain society, there are two groups, Red and Brown. No marriage is permitted within a group. On marriage, males become part of their wife's group, Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden.

17. A male born in the Brown group may have
- (A) an uncle in either group (B) a brown daughter
 - (C) a Brown son (D) a son-in-law born into the Red group
 - (E) a daughter-in-law in the Red group

18. A brown female could have had
(I) a grandfather born Red
(II) a grand mother born Red
(III) two grandfathers born Brown
(A) I only (B) III only (C) I and II only
(D) II and III only (E) I, II & III
19. Which of the following is not permitted under the rule as stated above?
(A) A Brown male marrying his father's sister.
(B) A Red female marrying her mother's brother.
(C) A widower marrying his wife's sister.
(D) A widow marrying her divorced daughter's ex-husband.
(E) A man born Red, who is now a widower marrying his wife's sister.
20. If widowers and divorced males retained the group they had upon marrying, which of the following would be permissible? (Assume that no previous marriage occurred)
(A) A woman marrying her dead sister's husband
(B) A widower marrying his brother's daughter
(C) A woman marrying her divorced daughter's ex-husband.
(D) A woman marrying her mother's brother, who is widower.
(E) A divorced male marrying his ex-wife's divorced sister.

Section III: English Language & Communication

This section consists of two parts. Part A contains MCQs that must be answered on the Answer Sheet. Part B must be answered in this test booklet in the spaces provided.

Part A: Multiple Choice Questions

1 × 30 = 30 marks

Directions: The underlined section in each of the following sentences may contain problems in grammar, sentence construction, word choice, and punctuation. Select the lettered answer that provides the best alternative to the underlined section and mark your **Answer Sheet** accordingly. Choice (A) always repeats the underlined section exactly; select it if the sentence is correct as it stands.

01. The mistakes children make in learning to speak tell linguists more about how they learn language than the correct forms they use.
(A) how they learn language than (B) how one learns language than
(C) how children learn language than do (D) learning language than
(E) their language learning than do

শব্দের অর্থ **linguists** (লিঙ্গুইস্ট্‌স্) - ভাষাবিদগণ;

02. A socio-economic survey shows that people living in small towns and rural areas consider themselves no happier than do people living in big cities.
 (A) no happier than do people living
 (B) not any happier than do people living
 (C) not any happier as do people who live
 (D) no happier than are people who are living
 (E) not as happy as are people who live
03. If the parent would have shown more interest, the daughter would have been in college today.
 (A) If the parent would have shown more interest
 (B) If the parent had shown more interest
 (C) If the parent would have showed more interest
 (D) Should the parent have shown more interest
 (E) If the parent would have been showing more interest
04. She never has and she never will do any work.
 (A) She never has and she never will do any work.
 (B) She never has and she will do no work
 (C) She never has and she will never do any work
 (D) Never has she and never will she do any work
 (E) She never has done and she never will do any work
05. The new contract forbids a strike by the workers union.
 (A) forbids a strike by the workers union
 (B) forbids the workers union
 (C) will forbids the workers union from striking
 (D) forbids that there be a strike by the workers union
 (E) will forbid the workers union from striking

Directions: Each sentence has one or two blanks, each blank indicating that something has been omitted. Beneath each sentence are five lettered words or sets of words. Choose the word or set of words that best fits the meaning of the sentence as a whole, and mark your Answer Sheet accordingly.

06. Why is it that even the most _____ of students occasionally _____ a seemingly simple question, and finds himself/herself unable to determine the correct answer?
 (A) conscientious balks at
 (B) dogged proposes
 (C) intuitive resolve
 (D) erudite overlooks
 (E) competent stumbles over

শব্দের অর্থ **stumble** (স্টাম্‌বল) - হোঁচট খেয়ে পড়া।

07. The bank cashier's _____ of the funds was not discovered until the auditors examined the accounts.

- (A) extradition (B) embezzlement (C) patronage
(D) an ingenious (E) verification

08. In sharp contrast to the previous night's revelry, the wedding was _____ affair.

- (A) a fervent (B) a dignified (C) a chaotic (D) an ingenious (E) a jubilant

শব্দের অর্থ **contrast** (কন্ট্রাস্ট) - বৈপরীত্য; **fervent** - উৎসাহী;
chaotic (ক্যা-অ-টিক) - বিশৃঙ্খল অবস্থা।

09. Many experts argue that a _____ grouping of students would improve instruction because it would limit the range of student abilities in the classroom.

- (A) heterogeneous (B) systematic (C) homogenous (D) sporadic (E) fragmentary

শব্দের অর্থ **sporadic** (স্পোরাইডিক) - থেমে থেমে।

10. The psychologist set up the experiment to test the rat's _____; he wanted to see how well the rat adjusted to the changing conditions it had to face.

- (A) reflexes (B) stamina (C) communicability
(D) adaptability (E) sociability

Directions: In each of the following sentences, one word or phrase is underlined. Five alternative words or phrases are provided for each underlined word or phrase. Select the alternative that would best keep the meaning of the original sentence if it were substituted for the underlined word or phrase, and mark your Answer Sheet accordingly.

11. The news eventually filtered through to the office staff.

- (A) made its way to (B) was known by all (C) surprised
(D) burst through (E) walked away

12. His poor health is the main stumbling block.

- (A) anxiety (B) worry (C) danger (D) disaster (E) obstacle

13. I cannot put up with his behavior.

- (A) understand (B) tolerate (C) have in my home
(D) control (E) comply with

14. The two firms were amalgamated last year

- (A) started doing business (B) became friendly (C) were united
(D) were split (E) were disrupted

15. Hurry up, or else you will be late.

- (A) because (B) however (C) therefore (D) at least (E) otherwise

Directions: The passage below is followed by five incomplete questions, each containing one blank space. Five alternative answers are provided for each blank. Select the best answer that completes the question and mark your Answer Sheet accordingly.

Afsana left home early that day because at 9 o' clock she was going to start work at an office in the city. This was her first job. But due to heavy traffic in the street she arrived a few minutes later. Afsana caught the lift up to the eighth floor and went along the hall way to the office where she was to work, she tapped on the door, but there was no reply, She heard someone's voice from the room next door. She opened that door and looked in. There was the manager, speaking to the people in the room in an angry voice. He then turned around and left the room. Later that day Afsana found out what happened. Apparently the manager came to the office as usual at about nine-thirty, because he lived out in the country and came by train every day. That morning, however, he happened to catch an earlier train, and when he arrived, not a single person was working. They were all standing around, smoking, chatting, and goofing about.

16. Why do you think there was _____ reply when Afsana knocked at the door?
(A) no (B) not a (C) some loud (D) never any (E) none
17. Why was the _____ angry?
(A) worker (B) neighbor (C) peer (D) subordinate (E) manager
18. If the manager _____ not caught an earlier train, what would have been the result?
(A) has (B) had (C) peer (D) is (E) must
19. What made Afsana _____ late?
(A) come in (B) go to work (C) arrive (D) a little (E) none
20. What kind of building _____ you think the office was in?
(A) do (B) should (C) would (D) shall (E) will

Directions: Each of the following passages is followed by a set of questions. Read each passage and answer the accompanying questions, basing your answers on what is stated or implied in the passage. Mark your answers on the Answer Sheet.

Passage one

Grapevine is a medium of communication that exists in every organization of whatever size or structure. It is a lateral communication that usually takes place among the peers. Grapevine is informal, follows no set pattern of content or direction and moves in various communication networks. It originates from the informal or social organization of the employees.

Most managers assume that the information flowing along the grapevine hardly reflects credit on the organization, is often inaccurate, and not infrequently causes problems. These assumptions are often correct. But to ignore the grapevine, hope it will go away, or pretend it does not exist is hardly a solution. The grapevine does exist; it does carry information; and it can be used with benefit.

The grapevine, if tapped wisely, can be an excellent source of information. It can tell management what activities certain individuals or groups are engaged in, what their future plans are, and how they feel about the organizational conditions and goals.

Some of the information in the grapevine is accurate and some are not. The wise manager sifts it all and, if she is perceptive and listens carefully, she can often discover situations that are apparently troublesome. Once the problems are recognized, these can be discussed either with individuals or with employee groups, and thus the situations are clarified.

The grapevine also allows employees to let off steam. Employees cannot usually talk back to their superiors and some of them feel better when they can talk over their problems with fellow colleagues rather than bottling them up. For the person who has a strong need for recognition the grapevine serves a useful purpose. This person can be the conveyor or conduit of news of major importance.

In almost every situation, it is unwise to ignore the grapevine. Everything in an organization environment will be discussed. If management does not communicate accurate information about the situation, employees will communicate what best serves their purposes or what they imagine to be the case. But silence will not exist; something will flow and management is wise to let the truth circulate rather than inaccurate and harmful rumor. Of course uncontrolled grapevine may result into bad rumor.

শব্দের অর্থ **tapped**_{verb} (ট্যাপ্ - ব্যবহার করা); **sifts** (সিফ্ট - যাচাই বাছাই করা)

21. The word Peer in the first paragraph is closest in meaning to:
(A) Subordinates
(B) employees belonging to the same section or department
(C) superiors
(D) employees belonging to the same or equivalent position
(E) none of these
22. What could be the negative side of grapevine
(A) Chain of command may become disrupted
(B) Bad rumor may spread.
(C) Formal communication will become less important
(D) Employees may fight each other.
(E) Organizational conspiracy may develop.
23. What should be an appropriate title of the passage?
(A) Bad effects of rumor (B) Grapevine (C) Grapevine vs. Rumor
(D) Grapevine as a Medium of Organizational Communication
(E) None of these

24. The Author's attitude toward **Grapevine** is generally:
 (A) critical (B) regretful (C) cynical
 (D) favorable (E) not clear
25. The words **let off steam** in the fifth paragraph is closest in meaning to :
 (A) to scold (B) to less (C) to express sympathy
 (D) to express anger (E) none

Passage Two

For year, it was believed that bribery and other forms of corruption were effective and even necessary tools for doing business in developing countries, By greasing the right palms, so the thinking went, firms achieved a competitive advantage. Not so. Research undertaken by the World Bank and others shows that far from lubricating business activity, bribery actually fuels the growth of excessive and discretionary regulations. Bribery, in short, feeds on itself, producing layer upon layer of bureaucracy eager to get in on the action.

The evidence also shows that countries with notoriously high levels of corruption risk marginalization in a world of rapid economic integration. This is all the more clear today. Many of the challenges we face today can be traced, in part, to cronyism, shallow disclosure requirements, and opaque record keeping. Open markets cannot work behind closed doors. Both private capital flows and official development assistance are increasingly discriminating with regard to policy performance and institutional integrity. Investors today have too many options, and they are better able to move their money to where the risks of corruption are less pronounced. And official donors, with shrinking aid budgets, have also drawn the line. Well-informed publics and wary aid agencies and development institutions are seeking returns on their aid investments in the form of poverty reduction and social development – with the same rigor that private investors look for financial returns. Perceptions in donor countries that corruption in recipient countries sends their aid assistance down a black hole is one of the greatest threats to future aid. Again it is the poor who suffer.

We at the World Bank, as with other multilateral organizations, are fully aware that despite continued vigilance and state-of-the-art auditing and investigative measures, the projects that we support are not immune from the pressures of corruption. There is simply no way to fully isolate individual projects and program lending from fraud if it is pervasive throughout the environment in which they function. This calls for continued efforts on the part of the Bank to pursue and prosecute fraud wherever we find it. While simultaneously strengthening the institutional structures that will ultimately help stop corruption at its source. It will be a difficult, long-term struggle. But make no mistake, it is a winnable fight, and one that must be fought.

26. The author believes that bribery leads to all of the following except
(A) It is difficult to isolate World Bank projects from fraud if corruption is pervasive in the environment
(B) The fight against corruption will not be an easy fight.
(C) Firms gain competitive advantage through corruption.
(D) Bribery encourages the growth of discretionary regulations.
(E) Perceived corruption regarding aid flows is a threat to future aid.
27. The phrase greasing the right palms in paragraph I means
(A) lubricating the business channels. (B) paying bribes to relevant persons.
(C) having an efficient work force. (D) taking necessary precautions against graft.
(E) making official fund transfers.
28. The writer is most likely
(A) a social researcher (B) an anti-corruptor officer
(C) a bureaucrat in a developing country (D) a World Bank official
(E) a civil servant.
29. The author suggests that corruption can be stopped as its resource by
(A) isolating projects and programs lending from fraud.
(B) simply maintaining constant vigilance and investigative measures.
(C) increasing the transparency in government transactions.
(D) reducing the quantum of aid flowing into developing countries.
(E) strengthening institutional structures and rooting out fraud.
30. The author's attitude towards the fight against corruption can be described as
(A) positive (B) over-enthusiastic (C) fanciful
(D) pessimistic (E) suspicious

Part B: Written Section 20 marks

Situation Response

[1 × 5 = 5 marks]

- The doctor says you should be in bed to the time being
- One at a time please ! I can't serve you all together
- He can get a bit bad-tempered at times.
- We got there just in time for dinner.
- By the time we get home, this pizza will be cold.
- I expected you to be late, the trains are never on time.
- I have told you time and again not to ring me at the office.

Which phrases from above could you use in the following situations? Write exactly what you might say after each statement, as in the example.

Example: To a child who repeatedly leaves the fridge door open despite being told off often.

I have told you time and again not to leave that fridge door open!

01. To someone you re happy to see who arrives just as you are serving tea/coffee.
02. One a postcard you expect will arrive at someone's house before you do.
03. A large group of people wants to talk to you but you'd prefer to see them individually.
04. Ask someone to use an old photocopier while the new one is being repaired.
05. Tell someone you'll do your best to arrive punctually at a meeting.

II. Sentence making

[1 × 5 = 5 marks]

Directions: From the collection of 20 words given in the box, write five sentences by using three words for each sentence. Sentences must be meaningful and logically linked. DO NOT use the same word in more than one sentence.

Rural.	Urban.	country.	people.
migrate.	support.	livelihood.	income.
opportunity.	transition.	infrastructure.	development.
rehabilitation.	law.	police.	exodus,
seasonal.	poverty.	employment.	work.

III. Writing Ability

Some people think that development of Information Technology (IT) will enhance human ingenuity. Others believe that development of IT will inhibit human ingenuity. Discuss both the points of view. Which view do you support? Give reasons for your choice.

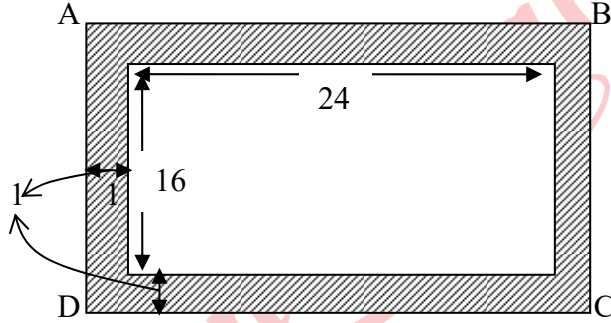
Section I: Mathematics

01. (B) প্রশ্নে বের করতে হবে $\frac{\text{is B}}{\text{of D}} = \frac{B}{D} = ?$

$$\text{এখন, } B = \frac{2}{3}C = \frac{2}{3} \times \frac{2}{3}D = \frac{4}{9}D \Rightarrow \frac{B}{D} = \frac{4}{9}$$

02. (B) Area of picture = $16 \times 24 = 384$ square cm.

এখন, frame-এর area বের করতে হলে প্রথমে নিচের মত করে figure-এঁকে নিলে বুঝতে সুবিধে হবে:



$$\therefore AB = 24 + 1 + 1 = 26; BC = 16 + 1 + 1 = 18.$$

$$\therefore \text{Area of (picture + frame)} = 26 \times 18 = 468 \text{ square cm.}$$

$$\therefore \text{Area of frame only} = 468 - 384 = 84,$$

$$\therefore \frac{\text{Area of picture}}{\text{Area of frame}} = \frac{384}{84} = \frac{96}{21} = \frac{32}{7} \approx 4.5$$

03. (D) মনে করি, একটি rear (রিআর - পিছনের) seat-এর price = x;

$$\therefore \text{front seat-এর দাম} = \frac{x}{3}$$

$$\therefore 600x + 450\left(\frac{x}{3}\right) = 4500 \Rightarrow 600x + 150x = 4500 \Rightarrow 750x = 4500$$

$$\Rightarrow x = \frac{4500}{750} = \frac{450}{75} = \frac{150}{25} = 6$$

04. (E) এটি সহজ। (A), (B) এবং (C) হলো true কেননা, এগুলোতে দেয়া আছে যে, ত্রিভুজের দুই বাহুর সমষ্টি তৃতীয়টি হতে বৃহত্তর। (D)-তে আছে, $AC + BC = AB + BC \Rightarrow AC = AB$ । $\therefore$ এটিও true। (E)-এর উভয় দিক থেকে BC বাদ দিলে আসে, $AC > AB$ যেটি পশ্চাৎ প্রদত্ত শর্ত $AB = AC$ -কে violate বা লঙ্ঘন করে। $\therefore$ উত্তর (E)।

05. (A) Number of students who took the final exam = 90% of 60 = 54

$$\text{Passed} = \frac{2}{3} \text{ of } 54 = 36$$

$$\therefore \text{did not pass} = 60 - 36 = 24$$

$\therefore$ Percentage of enrolled students who failed in the exam

$$= \frac{24}{60} \times 100\% = \frac{240}{6}\% = 40\%$$

06. (A) এ ধরনেরগুলো নিচের মত table বানিয়ে নিলে সহজেই solve করা যায়:

	Men	Women	Total
Married			
Unmarried			
Total			

$$70\% = \frac{70}{100} = \frac{7}{10} \text{ of the members হলো women।}$$

$$\therefore \text{men} = \text{total} - \text{women} = 1 - \frac{7}{10} = \frac{3}{10}$$

$\therefore$

	Men	Women	Total
Married			
Unmarried			
Total	$\frac{3}{10}$	$\frac{7}{10}$	1

$$\text{আবার, } 60\% = \frac{60}{100} = \frac{6}{10} = \frac{3}{5} \text{ হলো married;}$$

$$\therefore \text{Unmarried} = \text{total} - \text{married} = 1 - \frac{3}{5} = \frac{2}{5}$$

$\therefore$

	Men	Women	Total
Married			$\frac{3}{5}$
Unmarried			$\frac{2}{5}$
Total	$\frac{3}{10}$	$\frac{7}{10}$	1

$$\text{আবার, যত পুরুষ আছে তার } \frac{2}{3} \text{ হলো single। } \therefore \frac{2}{3} \text{ of } \frac{3}{10} = \frac{1}{5} \text{ হলো single।}$$

	Men	Women	Total
Married			$\frac{3}{5}$
Unmarried	$\frac{1}{5}$		$\frac{2}{5}$
Total	$\frac{3}{10}$	$\frac{7}{10}$	1

$$\therefore \text{married men} = \frac{3}{10} - \frac{1}{5} = \frac{3-2}{10} = \frac{1}{10}$$

$$\therefore \text{married women} = (\text{Total fraction of married men and married women}) -$$

$$(\text{fraction of married men}) = \frac{3}{5} - \frac{1}{10} = \frac{6-1}{10} = \frac{5}{10} = \frac{1}{2}$$

$$\therefore \frac{\text{Married women}}{\text{Total women}} = \frac{\frac{1}{2}}{\frac{7}{10}} = \frac{1}{2} \times \frac{10}{7} = \frac{5}{7}$$

07. (B) প্রশ্নে জানতে চেয়েছে যে, সবচেয়ে কম কত ভোট পেয়ে একজন প্রার্থী বিজয়ী হতে পারে। তার মানে, বাকি চারজন পরাজিত প্রার্থীকে maximum সম্ভাব্য ভোট পেয়ে হারতে হবে। এধরনের অঙ্কে প্রথমে যত জন প্রার্থী আছে তাদের মধ্যে মোট ভোটের সংখ্যাকে সমান ভাগে ভাগ করে দিতে হবে। বিজয়ী প্রার্থীকে সমান সংখ্যক ভোট থেকে একটি ভোট বেশি পেতে হবে। এই অঙ্কে 356-টি ভোট 5 জন প্রার্থীর মধ্যে ভাগ করে দিতে হবে। যেহেতু 356 সংখ্যাটি 5 দিয়ে বিভাজ্য নয়, তাই প্রথমে 356 থেকে 1 কমিয়ে 5 দিয়ে বিভাজ্য সংখ্যা 355 বানানো হলো। এখন, $\frac{355}{5} = 71$ অর্থাৎ প্রত্যেকে সমান সংখ্যক 71-টি ভোট পাবে।

$\therefore$ সরিয়ে রাখা 1-টি ভোট successful candidate-কে দিলে, সে পাবে $71 + 1 = 72$ -টি ভোট।

08. (A) Total wage (ওয়েইজ্ - বেতন) = $8d + 4c$; $\therefore$ Average wage = $\frac{8d + 4c}{12} = \frac{2d + c}{3}$

09. (B) মনে করি, starting salary (প্রারম্ভিক বেতন) = x টাকা।

$$\therefore \text{প্রথমবার } 10\% \text{ বাড়ানোর পর বেতন} = x + 10\% \text{ of } x = 1.1x$$

$$\therefore \text{দ্বিতীয়বার } 10\% \text{ বাড়ানোর পর বেতন} = 1.1x + 10\% \text{ of } 1.1x = 1.1x + 0.121x = 1.221x$$

$$\text{তৃতীয়বার } 10\% \text{ বাড়ানোর পর বেতন} = 1.221x + 10\% \text{ of } 1.221x = 1.221x + 0.1221x = 1.3431x$$

$$\therefore 1.3431x = 13310 \Rightarrow x = \frac{13310}{1.3431} = \frac{13310000}{13431} = 10,000$$

$$10. (A) \frac{3}{7} - 20\% \text{ of } 2 = \frac{3}{7} - \frac{2}{5} = \frac{15-14}{35} = \frac{1}{35}$$

$$11. (C) \text{ দেয়া আছে, } g(x) = x^3 + 3; \therefore g(z) = 2^3 + 3 = 11$$

$$\text{আবার, } f(x, y) = x + 2y; \therefore f[5, g(2)] = f[5, 11] = 5 + 2 \times 11 = 5 + 22 = 37$$

$$12. (A) \text{ এটাতে একটি formula আছে, সেটি হলো: দুটি সংখ্যার যেকোনোটি}$$

$$= \frac{\text{সংখ্যা দুটির গ.সা.গু} \times (\text{ল.সা.গু})}{\text{অপর সংখ্যা}}; \therefore \text{উত্তর} = \frac{A \times B}{C}$$

S@ifur's Math বইয়ের “HCF এবং LCM” chapter-এ প্রচুর solve করা আছে।

$$13. (A) \text{ মনে করি, দুই বৎসর আগে pen B-এর price ছিল } = x \text{ টাকা;}$$

$$\therefore \text{ তখন Pen B-এর দাম ছিলো } = (x + 70) \text{ টাকা } \therefore \text{ Increased price of B } = (x + 20)$$

$$\text{এবং increased price of A } = (x + 70) + 100\% \text{ of } (x + 70)$$

$$= (x + 70) + (x + 70) = 2(x + 70)$$

$$\therefore (x + 20) + 2(x + 70) = 250 \Rightarrow x + 20 + 2x + 140 = 250 \Rightarrow 3x + 160 = 250 \Rightarrow x = 30$$

$$14. (C) \text{ মনে করি, প্রতিটি math problem-এ } x \text{ মিনিট সময় ব্যয় হবে।}$$

$$\therefore 50\text{-টি math-এ সময় ব্যয় হবে } = 50x \text{ মিনিট।}$$

$$\therefore \text{ বাকী } (200 - 50) = 150\text{-টি অন্য ধরনের problem-এ সময় ব্যয় করতে হবে}$$

$$= 150 \times \frac{x}{2} = 75x \text{ মিনিট।}$$

$$\therefore 50x + 75x = 3 \times 60 = 180 \Rightarrow 125x = 180 \Rightarrow x = \frac{180}{125} = \frac{36}{25}$$

$$\therefore \text{ math problem-এ ব্যয়িত মোট সময় } = \frac{36}{25} \times 50 = 72 \text{ মিনিট।}$$

$$15. (B) \text{ Half past six অর্থাৎ ঠিক সাড়ে ছয়টায় মিনিটের কাটা থাকবে ঠিক six বারবার এবং ঘন্টার কাটা থাকবে ঠিক 6 এবং 7-এর মাঝে বরাবর। এখন, পুরো 12 ঘন্টায় হলো মোট } 360^\circ \text{। প্রতি ঘন্টায় হলো}$$

$$\frac{360^\circ}{12} = 30^\circ \text{। } \therefore 6 \text{ এবং } 7\text{-এর মাঝে আছে } 30^\circ \text{।}$$

$$\text{এখন, ঘন্টার কাটা আছে 6 এবং 7-এর ঠিক মাঝে এবং মিনিটের কাটা হলো ঠিক 6 বরাবর।}$$

$$\therefore \text{ কাটা দুটোর মাঝে হলো } \frac{30^\circ}{2} = 15^\circ \text{।}$$

$$16. (D) \text{ প্রতিটি বৃত্তের ব্যাস } = 2r \text{। এখন, বৃত্ত দুটোর ব্যাসের দৈর্ঘ্যদ্বয়কে যোগ করলে আয়তক্ষেত্রের দৈর্ঘ্য}$$

$$= 2r + 2r = 4r; \text{ আর আয়তক্ষেত্রের প্রস্থ } = \text{বৃত্তের ব্যাস} = 2r \text{।}$$

$$\therefore \text{ area of shaded portion } = \text{Area of rectangle} - \text{area of 2 circles}$$

$$= 2r \times 4r - 2 \times \pi r^2 = 8r^2 - 2\pi r^2 = 2r^2 (4 - \pi)$$

17. (C) প্রদত্ত তথ্য থেকে, $BD = DC = \frac{BC}{2} = 5 \text{ cm}$ । এখন, একটু চিন্তা করলে দেখা যায়, D-কে 5

ব্যাসার্ধবিশিষ্ট একটি বৃত্তের কেন্দ্র হিসেবে ধরলে $\angle BAC = 90^\circ$ হবে সেই বৃত্তের BC ব্যাসের উপর অঙ্কিত একটি অর্ধবৃত্তস্থ কোণ। অর্থাৎ, A হলো সেই বৃত্তের একটি পরিধিস্থ কোণ।

$\therefore AD$ হলো একটি ব্যাসার্ধ। $\therefore AD = 5 \text{ cm}$.

18. (D) মনে করি, প্রথম দোকান থেকে সে x -টি chocolates কিনেছিলো।

$\therefore$ প্রতিটি চকোলেইটের দাম $= \frac{120}{x}$ টাকা।

$\therefore$ পরের দোকানে প্রতিটির দাম $= \left(\frac{120}{x} - 3 \right)$ টাকা।

এই দরে সে এই দোকান থেকে $(x + 2)$ -টি chocolates কিনতে পারতো।

$$\therefore (x + 2) \left(\frac{120}{x} - 3 \right) = 120 \Rightarrow 120 - 3x + \frac{240}{x} - 6 = 120 \Rightarrow -3x^2 + 240 = 6x$$

$$\Rightarrow 3x^2 + 6x - 240 = 0 \Rightarrow x^2 + 2x - 80 = 0 \Rightarrow x^2 + 10x - 8x - 80 = 0$$

$$\Rightarrow x(x + 10) - 8(x + 10) = 0 \Rightarrow (x + 10)(x - 8) = 0; \therefore x = 8, \text{ বা } x = -10$$

যেহেতু chocolate-এর সংখ্যা negative হতে পারবে না, তাই $x = 8$ গ্রহণযোগ্য।

19. (B) যে 70% people TV news, দেখে, তাদের মধ্যে এমন লোক আছে যারা newspaper-ও পড়ে এবং TV news দেখা উভয়ই করে; আবার, ঐ ৭০%-এর মধ্যে এমন লোকও আছে যারা শুধু TV news দেখে, কিন্তু newspaper পড়ে না।

$$\therefore \text{শুধু TV news দেখে} = 70\% - \text{both} = 70\% - 25\% = 45\%;$$

$$\text{একই যুক্তিতে, শুধু newspaper পড়ে} = 35\% - \text{both} = 35\% - 25\% = 10\%$$

$$\therefore \text{TV-ও দেখে না, newspaper-ও পড়ে না এমন লোক}$$

$$= 100\% - \text{both} - \text{only Tonly newspaper}$$

$$= 100\% - 25\% - 45\% - 10\% = 100\% - 80\% = 20\%$$

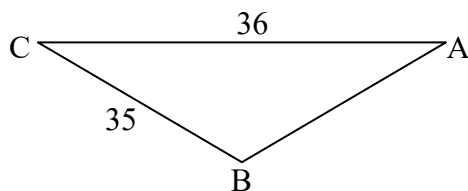
20. (A) এটি একটু চিন্তা করে বুদ্ধি খাটিয়ে সহজেই বের করা যাবে। ২৮ মিটার দীর্ঘ বাহুর A এবং B বিন্দুতে দুটো খুঁটি বসানো আছে। সাত মিটার পরপর খুঁটি বসালে AB বাহুর সপ্তম, চৌদ্দতম এবং ২১ তম

মিটারে আরো তিনটি খুঁটি বসাতে হবে। তার মানে, $\frac{28}{7} - 1 = 4 - 1 = 3$ -টি additional খুঁটি

লাগবে। $\therefore BC$ বাহুর $\frac{35}{7} - 1 = 5 - 1 = 4$ -টি এবং AC বাহুর $\frac{56}{7} - 1 = 7$ -টি

additional খুঁটি লাগবে।

∴ total $3 + 4 + 7 = 14$ -টি additional খুঁটি লাগবে।



21. (D) এটিতে যদি বোকার মত সবগুলো city-র percentage change বের করতে যান, তবে অনেক বেশি সময় লাগবে। বরং প্রথমে দেখুন কোন্ শহরের জনসংখ্যা ১৯৫০ সালে সবচেয়ে কম ছিলো। সেটি হলো বগুড়া = 0.60 million।

$$\therefore \text{change} = 0.93 - 0.60 = 0.33 \text{ million}।$$

$$\therefore \text{percentage change} = \frac{\text{change}}{\text{original}} \times 100\% = \frac{0.33}{0.60} \times 100\%$$

$$= \frac{33 \times 100}{60} \% = \frac{11 \times 10}{2} \% = 55\%।$$

এখন, একটু চোখ বুলিয়ে দেখুন অন্য কোনো শহরেরই জনসংখ্যা ১৯৫০-এ যা ছিলো, ১৯৬০-এ তার অর্ধেকের চেয়ে বেশি বাড়েনি।

22. (D) In 1950 five largest cities have total population
 $= (7.89 + 3.62 + 1.97 + 2.07 + 1.85) = 17.40 \text{ million}$

$$\therefore \text{percent of population who lived in cities} = \frac{17.4}{86} \times 100\% \approx 20\%$$

23. (D) Change in population in Sylhet from 1940 to 1960
 $= 1.67 - 1 = 0.67 \text{ million}$

$$\therefore \text{percentage increase} = \frac{\text{change}}{\text{original}} = \frac{0.67}{1} \times 100\% = 67\%$$

24. (D) In 1960 Khulna's population = 1.96 million;
 $\therefore$ In 1960 Feni's population = 0.75 million

$$\therefore \frac{1.96}{0.75} = \frac{196}{75} \approx \frac{8}{3} \approx 2.6$$

25. (E) Hasib = 140% of Shawkat $\Rightarrow H = 1.4S$; $Mo = 0.9 Mi$; $Mi = 2S$;

$$\therefore Mo = 0.9 \times 2S = 1.8S; \therefore \frac{Mo}{H} = \frac{1.8S}{1.4S} = \frac{18}{14} \times 100\% = \frac{900}{7} \% = 128 \frac{4}{7} \%$$

26. (C) মনে করি, বৃত্তের ব্যাসার্ধ = $r = XO = YO$; $\therefore \frac{1}{2} \times r \times r = 32 \Rightarrow r^2 = 64$;

$$\therefore \pi r^2 = \pi \times 64 = 64\pi$$

27. (B) মনে করি, দোকানদারের জন্য cost (তার মানে খরচ) = x ;
এখন, 48 টাকার শার্ট 25% discount-এ বিক্রয় করার পরও সে cost-এর উপর 20% লাভ করে।
 $\therefore$ বিক্রয়মূল্য = $x + 0.2x = 1.2x$; $\therefore 48 - 25\% \text{ of } 48 = 1.2x$;
 $\Rightarrow 48 - 12 = 1.2x \Rightarrow x = \frac{36}{1.2} = 30$
28. (E) Salim পাবে = $\frac{1111}{24000} \times 12,000 = 555.50$
29. (B) tune-up-এর পর যায় = $15 + 15\% \text{ of } 15 = 15 + 2.25 = 17.25 \text{ km}$
 $\therefore \frac{150}{17.25} = \frac{15000}{1725} = \frac{600}{69} = \frac{200}{23} \approx 8.7$
30. (C) $\frac{1}{x^2} - \frac{1}{y^2} = 21 \Rightarrow \left(\frac{1}{x} - \frac{1}{y}\right)\left(\frac{1}{x} + \frac{1}{y}\right) = 21$
 $\Rightarrow \left(\frac{1}{x} - \frac{1}{y}\right)(7) = 21 \Rightarrow \frac{1}{x} - \frac{1}{y} = 3 \text{ and } \frac{1}{x} + \frac{1}{y} = 7 \therefore \frac{2}{x} = 10 \Rightarrow x = \frac{1}{5}$

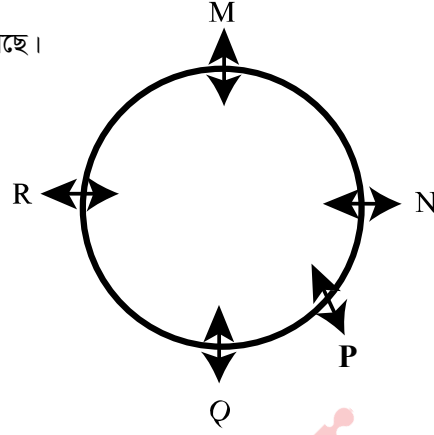
Section II: Analytical Ability

01. (E) *Team play* = দলগত খেলা অর্থাৎ যে খেলাগুলোতে প্রতিটি দলে একাধিক খেলোয়াড় থাকে।
authority = কর্তৃত্ব। *Socialist* (সোশালিস্ট) *tendency* = সমাজতান্ত্রিক প্রবণতা।
subordination (সাবঅর্ডিনেশন) = বশ্যতা; অধীনতা।
পুরো বাক্যের অর্থ: দলগত খেলাগুলো (যেমন: ফুটবল) শক্তিশালী সমাজতান্ত্রিক প্রবণতা প্রদর্শন করে এই দিক দিয়ে যে, (এই খেলাগুলোতে) কোচ ও ম্যানেজারদের কর্তৃত্বের কাছে ব্যক্তির অধীনতা / বশ্যতা হলো আবশ্যকীয়। তার মানে, ফুটবল, হকি প্রভৃতি দলগত খেলায় কোনো খেলোয়াড়ই তার ব্যক্তি - স্বাধীনতা প্রয়োগ করতে পারে না, বরং দলের স্বার্থে কোচ এবং ম্যানেজারের কর্তৃত্বের কাছে অর্থাৎ তাদের আদেশ-নিষেধের কাছে প্রত্যেকটি খেলোয়াড়কেই নিজেদের স্বকীয়তাকে দমন বা বিলীন করতে হয়। আর, দলের স্বার্থে অর্থাৎ বৃহত্তর স্বার্থে ক্ষুদ্রতরকে বিসর্জন দেয়া হলো এক ধরনের *socialist tendency*। $\therefore$ বোঝা যাচ্ছে, *socialism* (সোশালিজম)-এর একটি *aspect* (অ্যাসপেক্ট - বৈশিষ্ট্য / দিক) হলো *individual subordination to authority*। অর্থাৎ, A, B, C, D কে infer করা যায়। উত্তর (E)।
02. (B) অনেকের জন্যই এটি solve করা কষ্টকর এবং confusing, কারণ আপাত: দৃষ্টিতে মনে হবে যে, একাধিক উত্তর ঠিক হচ্ছে। এখন আসুন দেখা যাক, কেন অন্য উত্তরগুলো ভুল।
(A)-তে বলা হলো যে, *second floor*-গুলোতে *lift* নেই। কিন্তু প্রশ্নে শুধু বলা আছে, *If a store has more than three floors, it has a lift*। এই বক্তব্য থেকে এটা ধরে নেয়া ভুল হবে যে, *2nd floor*- গুলোতে *lift* নেই, তাই (A)-এর বক্তব্য true হতেও পারে, নাও হতে পারে। একইভাবে (C)-কেও বাদ দেয়া যায় কেননা, (C)-তে বলা হলো যে, শুধু *third floor*-এর নিচে কোনো *lift* নেই। (D)-এর বক্তব্য must be true নাও হতে পারে; কেননা, এমন *floor* থাকতে পারে, যেগুলোতে *lift* দিয়ে *reach* করা যায় না। (E)-এর বক্তব্যও ভুল হতে পারে; কেননা, এমন তো হতে পারে যে, সব *two-floor departmental store*-এ *lift* আছে। $\therefore$ সঠিক উত্তর হলো (B), কেননা, মূল বক্তব্যে বলা আছে যে *three floor*-এর বেশি থাকলেই ঐ *store*-এ *lift* আছে।

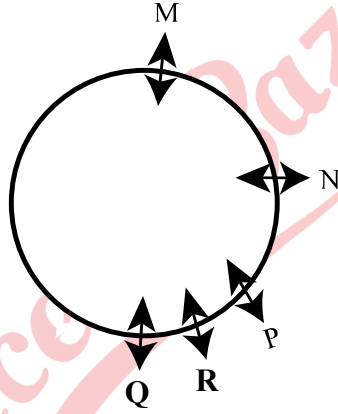
03. (E) দেয়া আছে, $I > S$ (i); $E > H$ (ii); $G > H$ (iii) $S = G$ (iv)
 $\therefore$ (iii) এবং (iv) থেকে, $S > H$ (v); $\therefore$ উত্তর (E)।
04. (E) এই argument-এর conclusion হলো “*I am going to be elected*” আর এই conclusion-এ পৌঁছার জন্য premise (প্রেমিস) হলো: *Nearly everyone at the rally is behind me* অর্থাৎ এই জনসভার প্রায় প্রত্যেকেই আমাকে ভোট দিবে। তার মানে, বোঝা যাচ্ছে, ঐ র্যালীতে Mr. Ali-র constituency (কনস্টিটিউয়েন্সী - কোনো একটি নির্বাচনী এলাকার সমস্ত ভোটারবৃন্দ)-এর বেশিরভাগ ভোটারই উপস্থিত ছিলো।
05. (D) climatologist (ক্লাইমেট-লজিস্ট - জলবায়ু বিশেষজ্ঞ); predict (প্রেডিক্ট - ভবিষ্যদ্বাণী করা); drought (ড্রাউট - খরা; অনাবৃষ্টি); soil erosion (ভূমি ক্ষয়); arid (এয়ারিড - উষ্ণ; শুষ্ক); fourfold - চারগুণ। pasture (প্যাস্চার - পশুচারণভূমি); hay (খড়); yield (ইল্ড - উৎপাদিত বস্তুর পরিমাণ)। পুরো passage পড়ে বোঝা যাচ্ছে (D) হবে উত্তর।
06. (D) $\frac{-186.61}{-166.04} \times 100\% = \frac{18661}{16604} \% = 112.4\%$
07. (C) $241.98 - 241.51 = 0.47$;
 $\therefore \% = \frac{47}{24151} \times 100\% = \frac{4700}{24151} \% = \frac{4700}{24200} \% = \frac{47}{242} \% = 0\%$
08. (A) $196.33 - 184.40 = 11.93$; $\therefore \% = \frac{11.93}{196.33} \times 100\% = 6.08\%$
09. (C) $175 - 155 = 20$; $\therefore \frac{20}{5} = 4$
10. (B) ডলির ধারণা, সে যে ১০৮ বৎসরের কোঠা অতিক্রম করলো, অর্থাৎ সে যে এতদিন বেঁচে আছে, এর কারণ হলো, সে প্রতি রাতে হুইসকি এবং প্রতি সকালে চুরুট খায়। প্রশ্নে বলা হয়েছে, তার এই যুক্তিকে counter(কাউন্টার) বা বিরোধিতা করা। অতএব, আমাদের দেখাতে হবে যে উল্লেখিত কারণে নয়, অন্য কোনো কারণে ডলি এত দীর্ঘ আয়ু পেয়েছেন। এই কথাটাই (B)-তে বলা হয়েছে।
11. (B) মিলা করলো $\frac{1}{3}$ অংশ। $\therefore$ বাকী থাকে $= 1 - \frac{1}{3} = \frac{2}{3}$ অংশ। এই $\frac{2}{3}$ অংশ নিলা এবং রিবা সমান ভাগে ভাগ করে নিলো।

$\therefore$ নিলা এবং রিবা প্রত্যেকেই $\frac{2}{3}$ -এর অর্ধেক অর্থাৎ $\frac{\frac{2}{3}}{2} = \frac{1}{3}$ করলো। তার মানে, তিনজনের প্রত্যেকেই $\frac{1}{3}$ করলো।

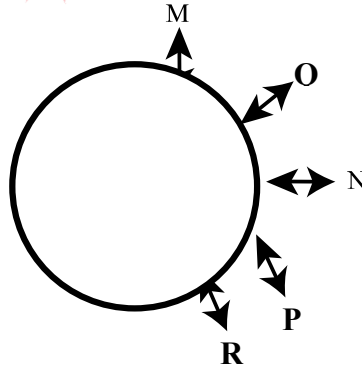
12. (E) প্রথমে তারা পাশের ছবির মত বসে আছে।



R তিনজনের উপর দিয়ে clockwise jump দিলে নিচের ছবি আসে:



তারপর Q ও জনের উপর দিয়ে counter clockwise (অর্থাৎ ঘড়ির কাটা যে দিকে চলে, তার বিপরীত দিকে) jump দিলে নিচের ছবি আসে: $\therefore$ উত্তর (E)



13. (D) একটু চিন্তা করলেই বুঝতে পারবেন যে, A, B বা C সত্যিই নাকি সে ব্যাপারে conclusively (কনক্লুসিভলি - নিশ্চিতভাবে বা চূড়ান্তভাবে) কিছু বলা যায় না।