2011

BENGALI ESSAY, PRÉCIS WRITING & COMPOSITION

Time Allowed—3 Hours   *Full Marks—100*

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored. If any question has parts, the prescribed number of parts must be attempted one after the other and not here and there.

Do not write your name, address etc. anywhere inside the answer-book.
Write X, Y, Z if necessary.

প্রশ্নের উত্তর **সাধু** অথবা **চলিত** ভাষায় লিখুন।

১। যে কোনো **একটি** বিষয় অবলম্বনে প্রবন্ধ রচনা করুন ঃ   ৩৫

   (ক) প্রতিবন্ধীদের প্রতি দেশ ও জাতির কর্তব্য;

   (খ) অপসংস্কৃতি ও যুবসমাজ;

   (গ) পণপ্রথা ও বধূনির্যাতন;

   (ঘ) ছাত্রসমাজ ও রাজনীতি।

২। প্রদত্ত যে কোনো **একটি** বিষয় অবলম্বনে দুই বন্ধুর কাল্পনিক বিতর্ক সংলাপ রচনা করুন ঃ   ১০

   (ক) বিশ্বায়নের সুবাদে দেশীয় শিষ্টাচার ও সৌজন্যবোধের পরিবর্তন;

   (খ) গঙ্গা দূষণ ও তার প্রতিকার।

৩। বাংলা ভাষায় অনুবাদ করুন ঃ   ১০

     A man with a strong will is sure to succeed in almost all the work he does. He never becomes daunted in any way. Difficulties may appear before him, but he firmly neglects them with strong determination, he pushes on. Gradually he finds that all the troubles disappear from his path one after another. He then reaches his goal and is crowned with success.

৪। (ক) অশুদ্ধি সংশোধন করুন ঃ   ৫

     অত্যাধিক, উদ্বেলিত, কুরঙ্গিনী, শূর্পনখা, সর্বাঙ্গিন।

   (খ) নিম্নলিখিত বাগধারাগুলিকে সার্থক বাক্যে প্রয়োগ করুন ঃ   ৫

     হাতের পাঁচ, কাঁঠালের আমসত্ত্ব, দন্তস্ফুট করা, হস্তিমূর্খ, অগস্ত্য যাত্রা।

৫। সার্থক শিরোনাম সহ যে কোনো **একটি** গদ্যাংশের সারসংক্ষেপ করুন ঃ   ৩৫

   (ক) সারা পৃথিবীব্যাপী ব্যাপকভাবে পরিবেশ দূষণের ফলে মানুষ আজ সুস্থ ও স্বাভাবিক জীবন হারিয়ে দুরারোগ্য ব্যাধিতে বিপন্ন। সভ্যতাবিকাশের সঙ্গে সঙ্গে মানুষ নিজের জীবন বিপন্ন করে তুলেছে। সে আজ স্বখাতসলিলে। মানুষের অজ্ঞতা ও প্রচণ্ড লোভ প্রকৃতির ভারসাম্যকে বিপর্যস্ত করে তুলেছে। অরণ্যে গাছপালা নেই, বন্যপ্রাণীও নিশ্চিহ্ন হতে বসেছে, বাতাস, জল ও ভূমি দূষিত। বর্তমানে নিজেদের জন্য তো বটেই, ভবিষ্যৎ প্রজন্মের জন্যও পরিবেশকে দূষণমুক্ত করা একান্ত প্রয়োজন। নিজেদের বাঁচার তাগিদেই পরিবেশ থেকে দূষক অপসারণ করতে হবে। সুখের বিষয়, এ বিষয়ে বিশ্বের বিজ্ঞানীসমাজ, বুদ্ধিজীবী মানুষ ও

রাষ্ট্রনেতারা এগিয়ে এসেছেন। রাষ্ট্রসংঘের নির্দেশানুযায়ী প্রতি বছর ৫ই জুন বিশ্ব-পরিবেশ দিবস পালিত হচ্ছে পৃথিবীর সব দেশে। পরিবেশ দূষণ সমস্যা নিয়ে আজ পৃথিবীর সব দেশই চিন্তিত, মানব-সভ্যতার অস্তিত্ব আজ এক সর্বনাশা সংকটের মুখোমুখি। মানুষের পরিবেশ নিয়ে সম্মিলিত জাতিপুঞ্জের অধিবেশন হয়ে গেছে। রাশিয়া, আমেরিকা, সুইডেন, জার্মানী, জাপান সিঙ্গাপুর ও অন্যান্য বহু দেশে জাতীয় স্তরে পরিবেশ সংস্থা গঠিত হয়েছে। পরিবেশ দূষণ রোধে আইনকানুন ও পরিবেশ সংরক্ষণ নীতি গৃহীত হয়েছে। ভারত পরিবেশ দূষণ রোধে বলিষ্ঠ পদক্ষেপে এগিয়ে চলেছে। পশ্চিমবঙ্গে দূষণ নিয়ন্ত্রণ পর্ষদ গঠিত হয়েছে। তাঁরা দৃঢ়ভাবে কাজ শুরু করেছেন।

(খ) তাজমহল! বহুলক্ষ কোটি মুদ্রা ব্যয়ে একে গড়া হয়েছে। শাহজাহানের অন্তরবেদনা, তাঁর পত্নীপ্রেমের চিরায়ত কাব্য নবমেঘদূত এই তাজমহল। ইতিহাস বলে, শাহজাহান প্রথম জীবনে নিষ্ঠুর ছিলেন। ভ্রাতৃরক্তে কলঙ্কিত করেন নিজেকে, অন্যদিকে তিনি জাঁকজমকপ্রিয় নৃপতি, প্রজাহিতৈষী। এসবের ঊর্ধ্বে তাঁর অন্তরপুরুষের সুন্দর পরিচয় মিলে তাজমহল সৃষ্টিতে। আমার তো মনে হয় প্রকৃত মানুষ শাহজাহানের পরিচয় রয়েছে এই তাজমহলের মধ্যে। ভারতসম্রাট জানতেন জীবন যৌবন ধনমান, হীরামুক্তামাণিক্যের ঘটা প্রভৃতি সবকিছু রাজকীয় বৈভব ও ঐশ্বর্য সবই ক্ষণস্থায়ী, বিলাস-বিভ্রম মাত্র। এগুলি শূন্যদিগন্তের ইন্দ্রজাল ইন্দ্রধনুচ্ছটার ন্যায় অচিরে কালস্রোতে বিলীন হয়ে যায়। কিন্তু প্রেমে প্রীতিতে মানুষের অন্তর্জীবনের যে পরিচয়, সেখানেই রয়েছে চিরকালের মানুষ। ঐতিহাসিক সম্রাট শাহজাহানকে ছাড়িয়ে চিরকালের প্রেমিক মানুষ শাহজাহান বেঁচে রয়েছেন তাজমহলের মধ্যে। প্রেমকে তিনি অনবদ্য শিল্পকর্মের মধ্যে অমর করে গেছেন। মানুষ তাঁর অনুরাগের সম্পদকে সাহিত্যে শিল্পকলায় চিরন্তন করে রাখতে চায়। শাহজাহান তাঁর গভীর আন্তরিক পত্নীপ্রেমকে শিল্পের মধ্যে, চিরন্তনত্বের গৌরব দান করেছেন।

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2011

ENGLISH ESSAY, PRECIS WRITING AND COMPOSITION

Time Allowed—3 Hours   *Full Marks—100*

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Do not write your name, address etc. anywhere inside the answer book.
Write X, Y, Z if necessary.

1. Write an essay on *any one* of the following topics: 35

    (a) The Role of the Judiciary in a Democracy.

    (b) Advertisements.

    (c) Corruption.

    (d) The attitude of Parents towards Higher Education for Girls.

    (e) Environmental Pollution.

2. Read the following passage and answer the questions following it:

    Education has always had two objects: On the one hand, to give skill; and on the other, to impart a vaguer thing which we may call wisdom. The role of skill has become very much larger than it used to be and is increasingly threatening to oust the role of wisdom. At the same time it must be admitted that wisdom in our world is useless except for those who realize the great part played by skills, for it is increase of skill that is the distinctive feature of our world.

    Although scientific skill is necessary, it is by no means sufficient. A dictatorship of men of science would very soon become horrible. Skill without wisdom may prove to be purely destructive. For this reason, if for no other, it is of great importance that those who receive a scientific education should not be merely scientific, but should have some understanding of that kind of wisdom which, if it can be imparted at all, can only be imparted by the cultural side of education. Science enables us to know the means to any chosen end, but it does not help us to decide upon what ends should be pursued. If you wish to exterminate the human race, it will show you how to do it. If you wish to make the human race so numerous that all are on the very verge of starvation, it will show you how to do that. If you wish to secure adequate prosperity for the whole human race, science will tell you what you must do. But it will not tell you whether one of these ends is more desirable than another. Nor will it give you that instinctive understanding of human beings that is necessary if your measures are not to arouse fierce opposition which only ferocious tyranny can quell. It cannot teach you patience, it cannot teach you sympathy, it cannot teach you a sense of human dignity. These things, in so far as they can be taught informal education, are most likely to emerge from the learning of history and great literature.

    Questions :

    (a) What should, according to the writer, be the aim of education?   6

    (b) Why is increase of skill a distinctive feature of our world?   4

    (c) What danger does the writer see in the present emphasis on imparting skill?   4

    (d) What knowledge does science impart to us?   6

Please Turn Over

3. Give the precis of the following passage and add a suitable title to it (use the special sheet prescribed for this purpose). 30+5

Men are not made in the same mould, like a lot of bricks. It would have ill-suited the wants of the world if it had been so. Consequently, even in the same country, men differ in disposition, and inclination, and manners, and opinion, more probably than they do in face or form. And between the people of different countries the contrast is even more striking. We have then also, different sentiments, different sympathies, different hopes, different ways altogether. It will always be so. So long as there are different minds, there will be different views on all matters that admit of opinion. So long as there are different degrees or latitude and longitude, as well as differing circumstances, there will be different interests, different attachments and different habits. It becomes us, therefore, to cultivate a generous spirit of forbearance towards those, of whatever race, who may think differently and act differently, from ourselves. Even though we may be convinced that they are wrong, if we know them to be sincere, we should still bear with them, and give them credit for their sincerity.

This is the virtue of toleration or bearing with others when we may differ from them, or may not like their ways. Toleration should be shown in all differences of opinion on even the highest matters of life and death; and here it is of more value than anywhere else, when we cannot agree to differ from him, and there is an end. We must always remember that we are all likely to make mistakes and possess weaknesses, and that we ourselves need the same forbearance and sympathy.

4. (a) Write a letter (within 200 words) to the Editor of a daily newspaper commenting on the impact of reckless auto-driving in your area. 10

Or,

Write a report (within 200 words) on the utilisation of Solar Energy.

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2011

GENERAL KNOWLEDGE AND CURRENT AFFAIRS

Time Allowed : 3 Hours   Full Marks : 100

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answer to each question should be started on a separate page.

parts of a question should be answered together and should not be interposed by answers to other questions.

Answers may be given either in English or in Bengali but all answers must be in one and the same language.

Group - A

1. Name the authors of the following books :

    (a) On the Origin of Species   (b) Gora

    (c) pride and prejudice   (d) Leviathan

    (e) Dhatridevata.   2x5

2. What do the following abbreviations stand for?

    (a) NASA   (b) UNESCO   (c) IMF   (d) WHO   (e) SAARC
                                                         2x5

3. Explain the following terms in brief :

    (a) Feminism   (b) Genetic Engineering

    (c) Hydrocarbon   (d) Epic   (e) Museology. 2x5

4. Who are they?

    (a) John Keats   (b) C V Raman

    (c) Sigmund Freud   (d) Mozart

    (e) Alexander Graham Bell.   2x5

5. (a) What is archaeology?   (b) Why is the Vatican City famous?

    (c) Name India's North-Eastern states.

    (d) Name the most famous river of Egypt.

    (e) What is artificial intelligence (AI)?   2x5

Group - B

Answer any four questions.

6. Discuss India's Look East policy.

7. What do you think about e-governance?

8. Discuss the achievements and limitations of the European Union in bringing about transnational political, economic and cultural integration in Europe.

9. Comment on the role of rural and urban local self-government institutions in Indian politics.

10. Discuss the importance of the Revolt of 1857 in Indian history.

11. Comment on the impact of globalization on Indian society and economy.

12. Discuss the heritage movement in contemporary India.

13. Comment on ecologically-friendly ways of creating energy that are being developed and increasingly being emphasized upon globally in recent years.   12½x4

2011

BUSINESS MATHEMATICS AND STATISTICS

Time Allowed—3 Hours   *Full Marks—100*

*If the questions attempted are in excess of the prescribed number,
only the questions attempted first up to the prescribed number
shall be valued and the remaining ones ignored.*

*Answers may be written either in **English** or in **Bengali** but all
answers must be in one and the same language.*

Group A (Business Mathematics)

Full Marks 50

Answer Question No.1 and **any Five** from the rest.

1. Answer *Any Five* only.   2×5

   (a) For any two sets A and B, prove that $(A - B)$ and $A \cap B$ are disjoint sets.

   (b) Find the sum of all odd numbers between 2 and 1000 which are divisible by 3.

   (c) a, M, N are positive real numbers $(a \neq 1)$, then prove that

   $\log_a (MN) = \log_a M + \log_a N$

   (d) If $^nP_5 = 20 \times {}^nP_3$, then find the value of n.

   (e) In how many ways can a person invite one or more of his 6 friends in a party?

   (f) Mr. X deposits Rs.8000/- for 3 years at 10% per annum, compounded annually. Calculate the total interest he will get after 3 years.

   (g) Prove that $\displaystyle\sum_{r=0}^{n} {}^nC_r \, 3^r = 4^n$

2. (a) Let A, B and C be three sets, such that $A \cup B = A \cup C$ and $A \cap B = A \cap C$. Show that $B = C$ 4

   (b) In a class of 50 students, 28 have taken Mathematics, 20 have taken Mathematics but not Biology. Find (i) the number of students who have taken both Mathematics and Biology and (ii) the number of students who have taken Biology but not Mathematics. Given that each student has to take either Mathematics or Biology or both.   4

3. (a) A sets out from a place and travels at the rate of 5 km/hr B sets out 4½ hours after A starts and travels in the same way as of A, 3 km in the 1st hour, 3½ km in the 2nd hour 4 km in the 3rd hour and so on. Find in how many hours B will overtake A, after B starts.   4

   (b) Find the least value of n for which $1 + 3 + 3^2 + 3^3 + \cdots + 3^{n-1} > 7000$ 4

Please Turn Over

4. (a) If $x = \log_a bc$, $y = \log_b ca$, $z = \log_c ab$, then show that   4

$$\frac{1}{x+1} + \frac{1}{y+1} + \frac{1}{z+1} = 1$$

   (b) Show that $\log_2 10 - \log_8 125 = 1$ 4

5. (a) If a and b are distinct integers, prove that $(a^n - b^n)$ is divisible by $(a - b)$, where $n \in N$ 4

   (b) A man lends Rs.1000 at 10.5% per annum compound interest, payable annually and another man lends the same sum at 10% per annum compound interest, but payable half yearly. Who is the gainer at the end of one year and by how much?   4

6. (a) If O be the sum of odd terms and E be that of even terms in the expansion of $(x + a)^n$, then prove that
   $4.O.E = (x + a)^{2n} - (x - a)^{2n}$ 4

   (b) There are three coplanar parallel lines. If any p points are taken on each of the lines, obtain the maximum number of triangles that can be formed with vertices at those points.   4

7. (a) If the number of diagonals of an n-sided polygon is equal to twice of its sides, find the value of n.   4

   (b) What are secondary data? State its advantages and disadvantages.   4

8. (a) Calculate the median for the following frequency distribution: 4

Marks	No. of Student	Marks	No. of Student
5 – 10	7	30 – 35	30
10 – 15	15	35 – 40	26
15 – 20	24	40 – 45	15
20 – 25	31	45 – 50	10
25 – 30	42		

   (b) The mean and stardard deviation of a set of 100 observations were worked out as 40 and 5 respectively by a computer which by mistake took the value 50 in place of 40 for one observation. Find the corrected mean and variance.   4

Group B (Statistics)

Full Marks 50

Answer Question No.9 and **any Four** from the rest.

9. Answer Any Five questions   2×5

   (a) The first four central moments of a distribution are 0, 2.5, 0.70 and 18.75. Comment on the skewness and kurtosis of the distribution.

   (b) The standard deviation of a symmetrical distribution is 3. What must be the value of the fourth moment about the mean in order that the distribution is mesokurtic?

   (c) Prove that the stardard deviation is independent of any change of origin, but is dependent on the change of scale.

(d) If the correlation coefficient between x and y is 0.7, determine the correlation coefficient between 4x and – 3y.

(e) Evaluate $\Delta^2 \left(\frac{1}{x-1} \right)$ taking $h = 1.0$

(f) Define Laspeyres and Paasche's methods of weighted aggregative indices and identify their difference.

(g) Distinguish between 'seasonal' and 'cyclical' fluctuations in time series data.

10. (a) The arithmetic mean of a certain distribution is 5. The second and third moments about the mean are 20 and 140 respectively find the third moment of the distribution about 10.   5

(b) Let the numbers $x_1, x_2, \ldots, x_n$ occur with frequencies $f_1, f_2, \ldots, f_n$ respectively, and let $u_i = \frac{x_i - x_0}{h}$

where x_0 and h are constant $(i = 1, 2, \ldots, n)$. Then obtain the relation between the variances s_x^2 and s_u^2 5

11. (a) A problem in statistics is given to five students A, B, C, D and E. Their chances of solving it are $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ and $\frac{1}{6}$ respectively. What is the probability that the problem will be solved?   4

(b) Assuming that A and B are two equally strong table tennis players, Which of the following events is more probable:

   (i) A beats B in exactly 3 out of 4 games

   (ii) A beats B in exactly 5 out of 8 games   6

12. (a) Show that $\Delta \log f(x) = \log \left\{ 1 + \frac{\Delta f(x)}{f(x)} \right\}.$ 3

(b) Find the missing terms in the following table:

x	2.0	2.1	2.2	2.3	2.4	2.5	2.6
y	0.135	?	0.111	0.100	?	0.080	0.074

7

13. (a) Calculate the coefficient of correlation from the following data by Spearman's rank-difference method: 5

Price of Tea (Rs.)	Price of Coffee (Rs.)	Price of Tea (Rs.)	Price of Coffee (Rs.)
75	120	60	110
88	134	80	140
95	150	81	142
70	115	50	100

(b) Form normal equations and hence find the most plausible values of x and y from the equations:

$x + y = 5.01$

$2x - y = 0.98$

$3x + 2y = 12.02$ 5

14. (a) Calculate Fisher's ideal index from the following data and verify that it satisfies both the time reversal and factor reversal tests: 6

Commodity	2008		2009	
	Price (Rs.)	Expenditure (Rs.)	Price (Rs.)	Expenditure (Rs.)
A	8	80	10	120
B	10	120	12	96
C	5	40	5	50
D	4	56	3	60
E	20	100	25	150

(b) The following are the index numbers of prices (2000 = 100)

Year	Index	Year	Index
2000	100	2005	410
2001	110	2006	400
2002	120	2007	380
2003	200	2008	370
2004	400	2009	340

4

Shift the base from 2000 to 2006 and recast the index numbers.

15. Apply the method of link relatives to the following data and calculate seasonal indices:

Quarterly Figures

Quarter	2005	2006	2007	2008	2009
I	6·0	5·4	6·8	7·2	6·6
II	6·5	7·9	6·5	5·8	7·3
III	7·8	8·4	9·3	7·5	8·0
IV	8·7	7·3	6·4	8·5	7·1

10

COSTING

Time Allowed—3 Hours   *Full Marks—100*

If the questions are attempted in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and remaining ones will be ignored.

*Answers may be written either in **English** or in **Bengali** but all answers must be in **one and the same language**.*

Answer **Question No. 9** and **any five** from the rest

1. A Company manufactures a product that is currently sold in the market @ Rs.2046 per unit. From the available cost data, it has been observed that:
    i) material costs are 50% of cost of sales, (ii) labour costs are 20% of cost of sales and (iii) Overhead charges are 30% of cost of sales.
    It is anticipated that the cost of material will increase by 10% and cost of labour will increase by 5% in the next period and such increase in cost will result in 25% decrease in present gross profit in relation to the prevailing selling price.
    What must be the selling price per unit of the product in the next period, if the company wants to maintain the same rate of gross profit as before?

    16

2. Consider the following particulars relating to an item of material and Calculate the best quantity to order.

Ordering Quantities (Kg.)	Discount (Rs.)
Up to 500	Nil
501 - 1000	100
1001 – 1500	200
1501 – 2000	300
2001 & above	400

    The annual requirement of the item is 2500 units. The cost of processing an order is Rs.200 and the carrying cost of inventory is Re.0.50 per unit per annum.
    Tabulate the different types of cost and effect of discount on different order sizes taking 1,2,3, 4 and 5 orders per annum and indicate the optimum order size.

    16

3. X, Y and Z are three workers in a manufacturing firm. From the following information, calculate their earnings under (a) Straight Piece Rate System, (b) Differential Piece Rate System, (c) Halsey Premium Scheme (50% sharing) and (d) Rowan Premium Scheme.

Worker	Hours Actually Worked	Number of Units Produced
X	45	480
Y	40	384
Z	36	256

Please Turn Over

Total working hours available during the week – 48 hours.
Standard production per hour - 8 units
Rate of wages per hour   Rs.20
Rate per unit   Rs. 2.50
Differential Piece Rate:

Efficiency Level	Rate
Below standard	80% of the Normal Rate
At 100% efficiency	Normal Rate
Above 110% -- 120% efficiency	110% of Normal Rate
Above 120% efficiency	125% of Normal Rate

2+6+4+4

4. P Ltd. has three production departments – X,Y & Z and two service departments – M & N. Overheads in respect of different departments, services rendered by the service departments and labour hours worked in the departments are known to be as follows. Calculate departmental overhead recovery rates.

	X	Y	Z	M	N
Overheads (Rs.)	13,000	10,800	8,400	7,200	5,000
Services rendered by M	40%	25%	20%	--	15%
Services rendered by N	25%	30%	35%	10%	--
Labour Hours Worked	2000	1500	1000	--	--

16

5. In course of manufacturing the main product M, a firm also gets two by-products P & Q. From the following details, show the total costs of P & Q at the point of separation and also prepare a statement showing Profit / Loss of all the three products.

Total costs at the point of separation   Rs. 2,00,000

	M	P	Q
	Rs.	Rs.	Rs.
Sales	2,00,000	50,000	62,500
Post-separation costs	--	10,000	13,750
Estimated profit on sales	--	25%	20%
Selling Expenses (% of sales)	10%	5%	6%

16

6. A firm manufactures and sales 15000 units of a product @ Rs. 200 per unit. From the following further information relating to the present level of operation, determine (a) Break-even Point, (b) Margin of Safety, (c) Units to be sold to earn a profit of Rs. 2,00,000 and (d) Profits to be earned on sales of 20,000 units.

    Factory Cost (60% Variable)   Rs. 15,00,000
    Administration Overhead (Fixed)   Rs. 6,00,000
    Selling & Distribution Overhead   Rs. 4,50,000
        (50% Fixed)

4+4+4+4

7. X Ltd manufactures three products – P, Q & R, using the same raw material, same type of machines and same labour force. Show the most profitable product mix and a statement of profit & loss for the optimum mix taking into consideration the information given below. It is known that the total labour hours available will be only 57,200 hours and the total fixed overhead is estimated to be Rs. 2,00,000.

	P	Q	R
Maximum Demand (units)	5000	6,000	3,000
Selling Price per unit (Rs)	120	110	100
Raw Material Cost per unit (Rs)	40	24	32
Direct Labour Hour per unit	8	6	4
Rate of Wage of Direct Labour (Rs. per Hour)	2	2	2
Variable Overhead per unit (Rs)	14	26	16

10+6

8. Standard as well as actual number of workers, labour hours for each of the workers, their hourly rates for a job are given below. Analyse the labour cost variances.

	Standard			Actual		
Category of Labour	No. of Workers	Hours	Rate/hour Rs.	No. of Workers	Hours	Rate/hour Rs.
Skilled	20	30	18	18	35	18.50
Semi-skilled	12	30	17	12	35	16.50
Unskilled	8	30	16	10	35	16.00

16

9. Write short notes on *any four:*
   (a) Master Budget
   (b) ABC Analysis
   (c) Responsibility Accounting
   (d) CVP Analysis
   (e) Inter-process Profit
   (f) Cost-plus Contract

5x4

2011

TAXATION LAWS AND PRACTICE

Time Allowed—3 Hours   *Full Marks—100*

*If the questions attempted are in excess of the prescribed number,
only the questions attempted first up to the prescribed number
shall be valued and the remaining ones ignored.*

*Answers may be written either in **English** or in **Bengali** but all
answers must be in one and the same language.*

Answer **any five** questions.

1. (a) Mrs. Kundu let out her furnished house to paying guests who were also provided with lunch, dinner etc. and earned ₹ 5,00,000 from them in the year 2009-10. Under what head of income will this income be assessed? Give your opinion with reason.   3

   (b) Give five cases of income from house property which are exempt from tax.   5

   (c) Mr. Das deducted ₹ 19,000 as unrealised rent while computing income from house property for the previous year 2004-05. He recovered ₹ 15,000 out of above sum on November 11, 2009 on spending legal expenses ₹ 1,350. He sold the house on March 15, 2008. How will it be treated under the income tax act in the assessment year 2010-11.   5

   (d) Mr. Mondal let out his house at Kolkata at a monthly rent of ₹ 5,000. The fair rent and standard rent of the property are ₹ 65,000 and ₹ 62,000 respectively, while the net rateable value as per municipal record is ₹ 50,000. He paid municipal tax @ 15%, water tax @ 9%, sewerage benefit tax @ 4% and education cess @ 1%. The house remained vacant from February 1, 2010 to April 30, 2010.

   Compute net annual value of the house property.   7

2. (a) What will be the value of perquisites in the following cases in the assessment year 2010-11:

   (i) Mrs. Sahu took a loan (free of interest) of ₹ 12,500 on December 1, 2009 from her employer for purchasing an almirah.   3

   (ii) Mr. Pradhan, an employee of S. Ltd., took an interest free loan of ₹ 15,600 from his employer on June 20, 2009 for purchase of a computer. He took another interest free loan of ₹ 6,500 from the same employer for his medical treatment (the disease is not specified in Rule 3A) on January 1, 2010.   3

   (iii) A son and a nephew of Mr. Jana, an employee of T. Ltd. are studying in a school in Kolkata. The school is maintained and owned by T. Ltd. The reasonable cost of such education is ₹ 1,800 per month per child. Mr. Jana, however, pays ₹ 1,500 per month to his employer for two children for the same.   6

   (b) Mr. Hajra retired from a private concern on March 31, 2009. His company paid ₹ 2,500 per month as pension. On January 31, 2010 the company paid ₹ 1,00,000 in lieu of commutation of 25% pension.

   Determine the taxable amount of pension of Mr. Hajra for the assessment year 2010-11, if—

   (i) the company did not pay any gratuity.

   (ii) the company paid ₹ 30,000 gratuity at the time of retirement.   8

Please Turn Over

3. (a) Abacus Co. Ltd. shows the particulars of following assets in the previous year 2009-10:

	Block I	Block II	Block III
Rate of Depreciation	20%	25%	40%
No. of assets in the block	10	15	20
W. D. value of the block on April 1, 2009	₹ 20,00,000	₹ 30,00,000	₹ 40,00,000
Purchase of New Plant in 2009-10:			
Plant A	₹ 45,00,000		
Plant B		₹ 50,00,000	
Plant C			₹ 30,00,000
Sale of old plant	₹ 10,00,000	—	₹ 35,00,000

All the new plants were purchased on August 14, 2009. Although Plant A and Plant C were put to use in September, 2009, the Plant B was put to use in February, 2010.

Find out the amount of normal depreciation and additional depreciation. 10

(b) Indicate, with reasons, the admissibility of the following expenses or losses in computing profits and gains of business or profession:

(i) X Ltd. paid ₹ 15,000 to a lawyer to examine the title deed of a land which the assessee intended to purchase. 2

(ii) Y Ltd. paid a fine of ₹ 7,000 for delay in payment of sales tax. 2

(iii) Z Ltd. paid ₹ 3,00,000 per month salary to an employee posted in Japan. Neither any tax has been deducted from his salary nor any tax has been paid for the same. 2

(iv) P. Ltd. paid a compensation of ₹ 60,000 to an employee who has been retrenched for fraudulence. 2

(v) Q. Ltd. spent ₹ 10,00,000 for shifting its factory from West Bengal to Jharkhand to avail facilities of raw materials. 2

4. (a) Mrs. Mitra sold her residential house in Kolkata on November 25, 2009 for ₹ 40,00,000. She acquired the house on December 1, 1990 for ₹ 2,50,000. She spent ₹ 5,000 for the purpose of sale. She deposited in capital gain deposit scheme ₹ 30,00,000 on July 15, 2010 for purchasing a new residential house property with two years.

Find out capital gain chargeable to tax for the assessment year 2010-11.

[Cost Inflation Index :   1990-91 : 182

                             2009-10 : 632]   6

(b) Mr. Panja purchased 1000 shares of ABC Co. Ltd. on July 9, 1985 @ ₹ 40 per share. The company issued him 100 bonus shares on March 5, 1986 and 500 bonus shares on May 15, 2005. He sold all the original shares and bonus shares (issued on March 5, 1986) @ ₹ 150 per share on December 15, 2009 to a broker, paying brokerage @ 2%. He sold remaining bonus shares in Calcutta Stock Exchange @ ₹ 120 per share on March 15, 2010.

Compute taxable amount of Capital gain of Mr. Panja for the assessment year 2010-11.

[Cost Inflation Index :   1985-86 : 133

                             2005-06 : 497,   2009-10 : 632]   6

(c) Compute total income of Mr. Dhani for the previous year 2009-10 from the following particulars:

   (i) Income from business ₹ 2,00,000.

   (ii) Received interest on US 64 Bond ₹ 6,000.

   (iii) Received rent by letting plant and machinery along with building (rent of building is not separable) ₹ 50,000. The rent collection charge ₹ 500 and insurance premium on the asset ₹ 700 were paid by Mr. Dhani. The depreciation of the building with plant and machinery was ₹ 1,000.

   (iv) He holds ₹ 50,000, 7% securities of Tamilnadu Government, interest on which is payable on December 1, every year.

   (v) He purchased NSC (VIII issue) for ₹ 10,000 on April 30, 2008 and for ₹ 20,000 on April 30, 2009.

   [NSC interest on 1st year and 2nd year are 8.16% and 8.83% respectively.]   8

5. (a) Mrs. Biswas, a resident individual, submits the following information:

	Amount (₹)
Loss from Business A for the year 2009-10	60,000
Brought forward loss of Business B for the year 2008-09	70,000
Profit of Business B in the year 2009-10	1,00,000
Brought forward loss of 2008-09 of Business C which was discontinued on April 30, 2009	40,000
Income from Speculation business	64,800

Determine the gross total income of Mrs. Biswas for the assessment year 2010-11 and also comment on carry forward of loss, if any.   7

(b) Mr. Patra, an employee of DEF Ltd., receives following gifts during the year 2009-10:

   (i) From his friend on July 15, 2009 ₹ 35,000.

   (ii) From his father's cousin on August 15, 2009 ₹ 10,000.

   (iii) From his employer a television (market price ₹ 25,000) on September 1, 2009 (The foundation day of the company).

   (iv) From his wife on their marriage anniversary on November 23, 2009 ₹ 50,000 and a gold ring (market price ₹ 35,000).

   (v) From friend a birthday gift by cheque ₹ 25,000 on March 31, 2010.

   (vi) From his grandfather on December 25, 2009 an amount of ₹ 55,000.

Compute the amount chargeable to tax under the head 'income from other sources' for the assessment year 2010-11.   6

(c) Mrs. Sen retired from a mercantile firm on October 31, 2009. In the last month of her service the salary was ₹ 30,000 (including D. A. @ 50% of basic salary). Her increment @ ₹ 400 fell due on July 1, every year. She completed 25 years and 6 months of service and received ₹ 2,40,000 as leave encashment for 12 months. She availed 16 months leave in the service period while she was entitled to leave of 35 days for each completed year of service. As per service rules 30% of D. A. forms part of salary for computation of retirement benefit.

Compute taxable amount of leave encashment of Mrs. Sen.   7

6. (a) State the provisions of Minimum Alternate Tax (MAT) under Indian Income Tax Act.   8

(b) K Ltd. shows a net profit of ₹ 9,15,000 in the year 2009-10 after debiting the following items. You are requested to determine the taxable income of the company for the assessment year 2010-11:

   (i) Repairing expenses of a property taken on lease ₹ 10,000.

   (ii) Architect fees for valuation of building ₹ 3,500.

   (iii) Income Tax paid in Italy ₹ 35,000.

   (iv) Initial expenditure on installation of CFL lights in the office ₹ 14,300.

   (v) Expenses on preparation of return of income ₹ 5,100.

   (vi) Payment in respect of lunch of three representatives of suppliers accompanied with the purchase manager of the company ₹ 4,000.   6

(c) L, M and N are partners of a firm. They share profits and losses in the ratio of 4 : 3 : 2. From the following particulars for the year ended 31st March, 2010, compute total income of the firm:

   (i) Salaries to L, M and N: ₹ 75,000, ₹ 60,000 and ₹ 40,000 respectively.

   (ii) Commission on sale to N: ₹ 5,000.

   (iii) Interest on capital @ 15% to L, M and N: ₹ 20,000, ₹ 16,000 and ₹ 12,000 respectively.

   (iv) Salary paid to N's husband (unreasonable in the opinion of Assessing Officer): ₹ 31,000.

   (v) Net loss: ₹ 80,000.   6

7. (a) Mrs. Acharya (aged 37 years), an Indian Citizen, furnishes the following particulars of her income and expenditure for the year ended March 31, 2010:

	Amount (in ₹)
Business income	98,000
Income from house property	78,000
Interest from P.O. Savings Bank Account	28,000
Winnings from horse race (expenses incurred for the same ₹ 3,000)	18,000
Long term capital gain on transfer of gold	88,000
Donation to the Government of India for promotion of family planning	38,000
Donation to National Children Fund	48,000
Donation of two computers to an approved charitable trust	58,000
Paid health insurance premium to GICI by cheque on the health of her father (aged 61 years)	18,000

Compute total income of Mrs. Acharya for the assessment year 2010-11.   8

(b) Mr. Basu owned three house properties and paid tax regularly on rental income. He died on January 15, 2010, leaving behind his wife and two minor children. Discuss how and in whose hands the rental income in the assessment year 2010-11 will be assessed?   5

(c) Mr. Bera (aged 52 years), a cultivator of tea, submits the following particulars of his income and expenses for the year 2009-10. Compute taxable income of Mr. Bera for the relevant assessment year.

	Amount (in ₹)
Sale proceeds of tea (after processed)	11,00,000
Growing and processing expenses	4,50,000
Selling expenses	73,000
Interest on loan taken for higher education of his son	25,000
Interest from Co-operative Bank	40,000
Accrued interest on NSC (excluding interest for sixth year of ₹ 650)	7,000

7

8. (a) Define 'excisable goods' under Central Excise Act.   4

(b) Define 'sale' and 'sale price' under Central Sales Tax Act.   4+4

(c) Mrs. Pal, a registered dealer under Central Sales Tax Act, furnishes the following particulars regarding inter-state sales for the fourth quarter of the year 2009-10. Compute the amount of Central Sales Tax payable by the dealer.

	Amount (in ₹)
Turnover (including Central Sales Tax)	10,00,000
Excise Duty	50,000
Freight, insurance and transport charges (shown separately in the invoice)	15,000
Installation charges	12,000

Additional Information:

   (i) Goods of ₹ 45,000 was returned by a dealer on June 10, 2010, which was sold on January 22, 2009.

   (ii) Goods of ₹ 5,000 was rejected by a customer on March 1, 2010, which was sold on March 30, 2009.

   (iii) A buyer, who bought goods of ₹ 30,000, could not issue Form C.

   (iv) The state VAT rate on the goods sold by Mrs. Pal is 4%.

   (v) All sales were made to registered dealers.   8

2011

ADVANCED ACCOUNTANCY

Time Allowed—3 Hours   *Full Marks—100*

If the questions attempted are in excess of the prescribed number,
only the questions attempted first up to the prescribed number
shall be valued and the remaining ones ignored.

*Answers may be written either in **English** or in **Bengali** but all*
answers must be in one and the same language.

Group A

Answer *Question No. 1* which is compulsory and *any two* from the rest.

1. J. Ltd. purchased control of N Ltd. on 1.7.2009. Following are the Balance Sheets of two companies as at 31.12.2009.

Liabilities	J. Ltd. ₹	N. Ltd. ₹	Assets	J. Ltd. ₹	N. Ltd. ₹
Equity Share Capital of ₹ 10 each	3,60,000	1,80,000	Goodwill	6,000	24,000
General Reserve	36,000	30,000	Land and Building	60,000	60,000
Profit & Loss A/c	60,000	60,000	Plant and Machinery	1,20,000	1,08,000
Creditors	60,000	42,000	Stock-in-trade	70,500	60,000
Bills payable to J Ltd. (Contingent liability of J Ltd. ₹ 9,000 for bill discounted)	—	6,000	Debtors	30,000	54,000
			Investment in 13,500 shares of N. Ltd.	2,02,500	—
			Cash at Bank	27,000	12,000
	5,16,000	3,18,000		516,000	318,000

N. Ltd. had on 1.1.2009 ₹ 30,000 in General Reserve and ₹ 36,000 (cr.) in Profit and Loss A/c. 10% dividend was received by J Ltd. in July from N Ltd. for 2010 and this amount was credited to Profit & Loss A/c of Holding Company.

Plant & Machinery standing in the books of N Ltd. at ₹ 1,20,000 on the date of purchase was revalued at ₹ 1,44,000. Stock of N. Ltd. includes ₹ 9,600 on which J Ltd. made a profit of 25% on cost.

Prepare consolidated Balance Sheet.   20

Please Turn Over

2. The following is the Balance Sheet of Sick Ltd. as on 31st December, 2010.

Liabilities	₹	Assets	₹
10% cumulative Preference Shares of ₹ 100 each fully paid	60,000	Goodwill	1,20,000
		Land & Building	60,000
Equity Shares of ₹ 10 each fully paid	4,20,000	Plant and Machinery	7,20,000
8% Debentures	1,80,000	Stock	12,00,000
Sundry Creditors	15,00,000	Debtors	6,00,000
Bills Payable	8,40,000	Cash at Bank	3,00,000
Provision for Taxation	1,80,000	Profit & Loss A/c	1,80,000
	31,80,000		31,80,000

The following scheme of reorganisation is sanctioned:

(i) Preference shareholders forgo their right to the arrear of preference dividend which are in arrears for the three years.

(ii) All existing equity shares are reduced to ₹ 5 each.

(iii) All preference shares are reduced to ₹ 75 each.

(iv) All creditors of the Company decide to forgo 50% of the claims, and they are allotted 60,000 equity shares of ₹ 5 each, in part satisfaction of the balance of claim.

(v) The rate of debenture is increased to 10%. The debenture holders surrender their existing debentures of ₹ 100 each, and exchange the same for fresh debentures of ₹ 75 each.

(vi) Goodwill and Profit & Loss A/c should be completely written off and other assets to be reduced as follows:

(a) Plant and Machinery by ₹ 1,80,000

(b) Stock by ₹ 4,20,000

(c) Reserve for doubtful debts to be made at 10% on Debtors.

(vii) Taxation liability has been assessed at ₹ 2,40,000

Pass journal entries and show Balance Sheet of the Company after giving effect to the above. 10+6

3. There was a serious fire in the premises of B Ltd. on 1st September, 2010. The business activities were interrupted until 31st December, 2010, when normal trading conditions were re-established. B Ltd. is insured under the loss of Profits policy for ₹ 42,000, the period of indemnity being six months.

You have been able to ascertain the following information:

(i) The net profit for the year ended 31st December, 2009 was ₹ 20,000.

(ii) The annual insurable standing charges amounted to ₹ 34,000 of which ₹ 6,000 were not included in the definition of insured standing charges under the policy.

(iii) The addition cost of working in order to mitigate the damage caused by the fire amounted to ₹ 1,200 and but for this expenditure, the business would have had to be shutdown.

(iv) The saving in insured standing charges in consequence of the fire amounted to ₹ 1,500.

(v) The turnover for the period of four months ended 30th April, 31st August and 31st December in each of the years 2009 and 2010 were as under:

	₹	₹	₹
2009	65,000	80,000	95,000
2010	70,000	80,000	15,000

You are required to compute the relevant claim under the terms of the loss of profit policy.   16

4.   The following balances related to Bijlee Co. Ltd. and pertains to the accounts for the year ended on 31st December, 2010.

	₹ (in lakh)
Share Capital	200
Fixed Assets	400
Average of Current Assets	40
Reserve Fund (invested in 6% Govt. Securities face value ₹ 120 lakhs)	120
6% investments of the contingencies Reserve	40
Loan from Electricity Board	60
Development Reserve	20
10% Debentures	16
Depreciation Reserve on Fixed Assets	160
Security Deposits of Customers	150
Customers contribution to main lines	4
Preliminary Expenses	10
Tariffs and dividend Control Reserve	12

The Company earned a profit of ₹ 22 lakhs before charging debenture interest. Indicate the disposal of profit, bearing in mind the provisions of the Electricity (supply) Act, 1948, assuming the Reserve Bank of India rate on the relevant date was 8%.   16

Group B

Answer *any three questions*.

5.   From the following information and ratios, prepare the Profit & Loss Account for the year ended 31st March, 2010 and the Balance Sheet as on that date of M/s S. Brothers.

Current Ratio	3	Acid Test Ratio	1
Current Assets to Stock	3:2	Financial Leverage	2.2
Earning per share (each ₹ 10)	10	Average collection period (Assume 360 days in the year)	30 days
Bank value per share	40	Stock turnover ratio	5
Fixed Assets turnover ratio	1.2	Net working capital	₹ 10 lakhs
Total liabilities to net worth	2.75	Net Profit to sales	10%
Variable cost	60%		
Long term loan interest	12%		16

6. The following is the Balance Sheet of B.C. Co. as at 31st December, 2010:

Liabilities	₹	₹	Assets	₹	₹
10,000 shares of ₹ 100 each, fully paid-up		10,00,000	Building at cost		1,60,000
Reserve Fund		3,00,000	Furniture at cost		6,000
Depreciation Fund:			Investments in 5% Govt.		
Building	20,000		Securities at cost		7,60,000
Investments	90,000	1,10,000	Stock-in-trade		
			(at market value)		8,50,000
Sundry Creditors		96,000	Sundry Debtors		6,50,000
Reserved for Bad Debts		40,000	(All considered good)		
Profit and Loss A/c:			Cash at Bank		1,40,000
Balance on 31.12.2009	8,60,000				
Profit for the year	1,60,000	10,20,000			
		25,66,000			25,66,000

It is now ascertained that:

(a) The Company's prospects for 2011 are equally good.

(b) Profits for the past three years have shown an increase of ₹ 40,000 annually.

(c) The Buildings are now worth ₹ 1,96,000 and Furniture ₹ 10,000.

(d) Companies of similar nature are shown a profit-earning capacity of 10% on the market value of the shares.

You are required to ascertain the fair value of each share showing in details your calculations. 16

7. The following Balance Sheets are prepared by X Ltd., and Y Ltd., as at 31.12.2010:

Liabilities	X. Ltd. ₹	Y. Ltd. ₹	Assets	X. Ltd. ₹	Y. Ltd. ₹
Share Capital:					
Shares of ₹ 10 each	2,00,000	1,00,000	Goodwill	30,000	10,000
Profit and Loss A/c	50,000	40,000	Sundry Assets	2,60,000	1,55,000
General Reserve	40,000	30,000	Investment 2000 shares in Y Ltd.	30,000	—
Sundry Creditors	30,000	10,000	1,000 shares in X Ltd.	—	15,000

Y Ltd. is absorbed by X. Ltd. consideration being 4 shares of X Ltd. for 5 shares of Y Ltd.

Close the books of Y. Ltd. and show the opening entries of X Ltd. 12+4

8. (a) Explain the provisions regarding maintenance of books of accounts of Government companies.

   (b) The trial balance of simplex Ltd. as at 31st March.

	Dr. ₹	Cr. ₹
Advance payment of Income Tax	2,20,000	—
Provision for Income Tax for the year ended 31.3.2009	—	1,20,000

The following further information are given:

   (i) Advance payment of income tax includes ₹ 1,40,000 for 2008-2009.

   (ii) Actual tax liability for 2008-2009 amounts to ₹ 1,52,000 and no effect for the same has so far been given in accounts.

   (iii) Provision for income tax has to be made for 2009-2010 for ₹ 1,60,000.

You are required to prepare (a) provision for income tax account, (b) advance payment of income tax account, (c) liabilities for taxation account and also show how the relevant items will appear in the Profit & Loss Account and Balance Sheet of the Company.   6+10