

INSTRUCTIONS TO TEST TAKERS

- You are advised to be sure about the correct answer before you darken the circle with pen. You should also ensure that each circle is completely darkened with pen. Partially or faintly darkened circles may be rejected by the optical scanner.
- Each question carries 1 mark. 0.25 mark will be deducted for every incorrect response.
- If you darken more than one circle, it will be deemed to be an incorrect answer.
- The areas tested in this examination are given below in the table:

Session		Subject	No. of Questions	Marks	Time
Session I	Section A	Fundamentals of Accounting	20	10	
Session 1	Section B	Mercantile Law	10	15	
Section II	Section C	General Economics	15	15	90 Minutes
Session II	Section D	Quantitative Aptitude	20	20	
Total		Total	65	65	

- Do your scratch work on the space available in the test booklet itself. Do not use any additional paper for rough work.
- © Calculators are allowed.
- After you finish taking the test, score it with the help of the Answer Key provided.

F	The	correct	way	of	shading	the	circles.	0	0	0		V
								0	0	0	lacksquare	X
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SCORE SHEET

Instructions

- Use pen on this sheet.
- Darken the circles fully.
- Do not make any stray marks on this sheet.

Mark Your Answers Here

a b c d	a b c d	a b c d	a b c d	a b c d
10000	14 0 0 0 0	27 0 0 0 0	40 0 0 0 0	53 0 0 0 0
20000	15 0000	28 0 0 0 0	41 0 0 0 0	540000
30000	16 0 0 0 0	29 0 0 0 0	42 0 0 0 0	55 0 0 0 0
40000	17 0 0 0 0	30 0 0 0 0	43 0 0 0 0	⁵⁶ OOO
50000	18 0000	31 0 0 0 0	44 0 0 0 0	570000
60000	19 0000	32 0 0 0 0	45 0000	$58 \bigcirc \bigcirc \bigcirc \bigcirc$
70000	20 0 0 0 0	33 0000	46 0000	⁵⁹
80000	21 0 0 0 0	34 0 0 0 0	47 0 0 0 0	$60\bigcirc\bigcirc\bigcirc\bigcirc$
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SESSION-I

Section-A - Fundamentals of Accounting

Number of Questions - 20 Total Marks - 20

DIRECTIONS for questions 1 to 5: Choose the correct alternatives.

1. Rakesh & Co. Ltd. issued Rs. 1,00,000, 11% debentures at 96% redeemable at the end of 10 years at 104%. The entry is:

a]	Bank A/c	Dr .	96,000
	Discount on Issue of Debentures A	/cDr.	4,000
	Loss on Issue of Debentures A/c	Dr.	4,000
	To 11% Debenture A/c		1,00,000
	To Premium on Redemption of	Debenture A/c	4,000
b]	Bank A/c	Dr	96,000
	To 11% Debenture A/c		96,000
c]	Bank A/c	Dr .	96,000
	Discount on Issue of Debentures A	/cDr.	4,000
	To 11% Debenture A/c		1,00,000
d]	Bank A/c	Dr	96,000
	Discount on Issue of Debentures A	/cDr.	4,000
	Loss on Issue of Debentures A/c	Dr.	2,000
	To 11% Debenture A/c		1,02,000

2. Suresh and Ramesh are sharing profits and losses equally. They agreed to admit Umesh with 1/5th share in partnership. He agreed to bring in cash his share of goodwill. It was decided to value goodwill as per Capitalization method. The past profits of the firm for five years are as follows:

Year	Profits
2002	30000
2003	40000
2004	50000
2005	60000
2006	70000

Rate of normal profit is 10%. On 31/12/2006 Capital employed was Rs.400000. Calculate the amount of cash that Umesh will bring as his share of goodwill.

a] Rs.166000 b] Rs.100000

c] Rs.166670 d] None of these



3. Following is the extract of Balance Sheet of Chocolate Ltd.

80,000 Equity shares of Rs.10 each, Rs.7.5 paid up	Rs.6,00,000
2,500 Preference shares of Rs.100 each, Rs.80 paid up	Rs.2,00,000
Securities premium	Rs.10,000
Capital Reserve	Rs.1,00,000
General reserve	Rs.3,50,000
Capital Redemption Reserve	Rs.1,50,000

It was decided to convert the partly paid up equity shares into fully paid up without requiring the share holders to pay for the same.

Write Journal entry for utilization of reserves for this purpose.

a]	Capital Redemption Reserve A/cDr	1,50,000
	General Reserve A/cDr	50,000
	To Bonus to Equity Shareholders A/c	2,00,000
b]	Capital Redemption Reserve A/cDr	1,50,000
	Securities Premium A/c	10,000
	General Reserve A/cDr	40,000
	To Bonus to Equity Shareholders A/c	2,00,000
c]	Securities Premium A/cDr	10,000
	Capital Reserve A/cDr	1,00,000
	General Reserve A/cDr	90,000
	To Bonus to Equity Shareholders A/c	2,00,000
d]	Capital Redemption Reserve A/cDr	1,50,000
	Capital Reserve A/cDr	50,000
	To Bonus to Equity Shareholders A/c	2,00,000

4. Raj, Rohit, Rohan were partners sharing profits & losses equally. They had a Fixed Capital of Rs. 1,00,000; Rs. 80,000; Rs. 45,000 respectively. The partners were given interest on their Capital @ 6% p.a. At the end of year 2007, partners' A/c were wrongly credited @ 7% instead of 6% for interest.

What will be the Adjusting Entry in the Books of Accounts for above error?

a]	Suspense A/c	Dr.	2,250
	To Raj's Capital A/c		1,000
	To Rohit's Capital A/c		800
	To Rohan's Capital A/c		450
b]	Raj's Current A/c	Dr.	1,000
	Rohit's Current A/c	Dr.	800
	Rohan's Current A/c	Dr.	450
	To Suspense A/c		2,250
c)	Raj's Capital A/c	Dr.	1,000
	Rohit's Capital A/c	Dr.	800
	Rohan's Capital A/c	Dr.	450
	To Profit & Loss A/c		2,250
d)	Profit & Loss A/c	Dr.	2,250
	To Raj's Current A/c		1,000
	To Rohit's Current A/c		800
	To Rohan's Current A/c		450



- 5. Calculate the amount, petty cashier will get, at the beginning of August 2007, if the Petty Cash Book is maintained as per Imprest System. Following are the transactions that took place in the month of July 2007.
 - July 1 Petty Cash in hand Rs.500
 - July 3 Paid Rs.36 for taxi fare.
 - July 6 Paid Rs.17 for sundries.
 - July 11 Paid Rs.56 to Mr. Smith who is a Creditor.
 - July 12 Paid advance salary of Rs.350 to a worker.
 - July 16 Paid Rs.22 for Printing and Stationery.
 - July 22 Paid Rs.7 for purchasing stamps.
 - July 23 Purchased goods of Rs.1000 from Mr. Salil.
 - July 27 Paid Rs.10 for courier charges.
 - al Rs.408
- b] Rs.92
- cl Rs.352
- d] Rs. 144

DIRECTIONS for questions 6 to 10: Read the following case study and answer the questions given below.

The Trial Balance showed a shortfall of Rs.1,481 in the debit column and is made to agree by putting this difference against Suspense Account. Later, the following errors were discovered.

- Goods worth Rs.350 were sold to Rohan on credit. This was recorded in the Sales book but was not posted to Rohan's A/c in the ledger.
- Goods worth Rs.115 were returned by Akash. The amount was credited to his account but was not entered in the Return Inward book.
- iii] Kirti Boutique paid Rs.150 but their account was credited for Rs.105.
- iv] Goods costing Rs.425 purchased from Neev were wrongly entered in the Sales book.
- v] An amount of Rs.500 owed from Sujith was omitted by the list of Sundry Debtors.
- vi] The Purchase book was overcast by Rs.159.
- vii] Cash Rs.670 paid to Shashank and Rs.760 to Sudhakar was debited to Shashank by Rs.760 and Sudhakar by Rs.670.
- viii] A cheque of Rs.210 issued to Mr. Kapoor was entered in the Bank column of the Cash book on the payment side and was posted to his credit in the ledger.
- ix] An account of Rs.175 due from Rinku, which had been written off as Bad debts in the previous year, was unexpectedly recovered and had been posted to her Personal account.
- x] Discount allowed Rs.150 was credited to Discount received account.
- xi] A cheque for Rs.950 received from Upen was dishonored and had been posted to the debit of the Sales Return account.
- 6. What will be the rectifying entry for transaction (v)?

a]	Sundry Debtors A/cDr.	500
	To Sales A/c.	500
b]	Sundry Debtors A/cDr.	500
	To Suspense A/c.	500
c]	Sales A/cDr.	500
	To Sundry Debtors A/c.	500
d]	Suspense A/cDr.	500
	To Sundry Debtors A/c.	500





- 7. What will be the impact on Net profit?
 - a] Net profit is decreased by Rs.19
- b] Net profit is increased by Rs.19
- c] Net profit is decreased by Rs.434
- d] Net profit is increased by Rs.434
- 8. What will be the change in balance of Sundry Debtors?
 - a] Increase by Rs.380

b] Decrease by Rs.380

c] Increase by Rs.1,330

d] Decrease by Rs.1330

- 9. What is the total of Suspense A/c?
 - a] Rs.1,061
- b] Rs.965
- c] Rs.1,685
- d] Rs.1,465
- 10. What will be the change in balance of Sundry Creditors?
 - a] Increase by Rs.835

b] Decrease by Rs.835

c] Increase by Rs.165

d] Decrease by Rs.165

Directons for questions 11 to 13: Refer to the data below and answer the questions that follow.

M/s M Ltd. closed their books of accounts on 31/3/08. There was a difference in the Balance Sheet which they transferred to Suspense A/c. After the accounts were closed, following errors were identified:-

- i] Purchase Book was overcast by Rs.4000.
- ii] Wages of Rs.500 paid for installing machinery were debited to Wages A/c.
- iii] Ramesh, an employee, had taken stock worth Rs.3000 on the eve of Diwali. It was debited to Ramesh's A/c and credited to Purchase A/c.
- iv] Goods of Rs.2000 purchased on credit from Aman were recorded in Sales Day Book and goods of Rs.8000 sold to Amar on credit were recorded in Purchase Day Book. However, Aman and Amar A/c were correctly posted in the ledger.
- 11. How much amount was transferred to Suspense A/c from the Balance Sheet and on which side?
 - a] Rs.10000 credit

bl Rs.5000 debit

c] Rs.3000 debit

- d] Rs.8000 credit
- 12. What will be the Rectification entry for error no. iv)?
 - a] Suspense A/c......Dr. 10000

To Aman's A/c. 2000

To Amar's A/c. 8000

To Aman's A/c.

4000

12000

c] Suspense A/c.....Dr. 12000

To Profit and loss

Adjustment A/c.

b) Amar's A/c.....Dr. 16000

To Purchases A/c.

To Sales A/c.

6000 6000

d] Suspense A/c....Dr.12000

To Sales A/c.

6000

To Purchases A/c.

6000



- 13. What will be the effect on Net profit after Rectification?
 - a) Net profit will increase by Rs.4500
- b] Net profit will increase by Rs.3000
- c] Net profit will decrease by Rs.3000
- d] Net profit will decrease by Rs.5000

DIRECTIONS for questions 14 and 15: Choose the correct alternative.

- 14. Mr. Parmeshwar has two accounts (A/c No.1 and A/c No.2) with Punjab National Bank. On 31.12.07 his ledger showed a balance of Rs.6,550 in A/c no.1 and an overdraft of Rs.3,000 in A/c no.2. On comparing ledger entries with the respective Bank pass book, the following discrepancies were noticed.
 - i) The deposit of Rs.1,000 made into A/c no.1 on 25th December has been entered in the Ledger in A/c no.2.
 - ii) A withdrawal of Rs.400 from A/c no.1 on 28th December has been entered in the Ledger in A/c no.2.
 - iii) Transfer of Rs. 500 from A/c no.1 to A/c no.2 were recorded by the bank on 31st December but entered in the Ledger on 2nd January.

Calculate balance as per Pass book (A/c no.1 & A/c no.2).

- a] Rs.6,550 Dr; Rs.3,000 Cr.
- b] Rs.6,550 Cr; Rs.3,000 Dr.
- c] Rs.6,550 Dr; Rs.3,000 Dr.
- d] Rs.6,550 Cr; Rs.3,000 Cr.
- 15. Ajay & Co. sent 50 cases of Soaps valued at Rs.200 each to Amar for sale on consignment basis. Ajay & Co. paid freight and insurance Rs.200. Each case contained 40 packets. Amar sold 1,300 packets @ Rs.8 each partly on credit and partly on cash. Amar was entitled to 5% normal commission and 1% del-credre commission. One customer who had purchased 100 packets had paid only for 75 packets and the balance had become a bad debt.

Calculate the amount of Profit or Loss on Consignment?

- al Rs.9776
- b] Rs.3,146
- c] Rs.5,654
- d] Rs.4,995

DIRECTIONS for questions 16 to 20: Read the following case study and answer the questions given below.

Following are the transactions for the year ended 31st March;2004-

- i] Sales of Rs. 4,000 (cost price Rs.3000), included in closing stock.
- ii] Rs.2,500 withdrawn by the proprietor for his personal use was debited to office expenses.
- iii] Salary of Rs. 5,000 for the month of March,04 taken by Mr. X in advance in the month of Feb,04, was debited to Salary A/c.
- iv] A bill of Mr. Y, dishonored on 28th Dec,2003 of Rs.10,100 was debited to Bills receivable A/c and credited to Bank A/c.
- v] Reimbursement of personal expenses Rs.7700 of an employee is debited to office expenses A/c.
- vi] Wages of Rs. 9,800 paid to the workers for installing the machinery was debited to Wages & Salaries A/c.



16. What will be the impact on net profita] Increased by Rs.12300
c] Decreased by Rs.17300
d] Increased by Rs.98

17. What will be the the impact on the total of Liabilities after passing rectification entries?

a] Increase by Rs.9,800 b] Decrease by Rs.2,500

c] No change d] Increase by Rs.12,300

18. What is the impact of the above transactions on assets?

a] Increase by Rs.8,700 b] Decreased by Rs.10,100

c] No change d] None of these

19. What is the rectification entry for transaction four?

a] Drawee (Debtors)......Dr. 10,100 b] Bank A/c.....Dr. 10,100 To Bills receivable 10,100 To Bills receivable 10,100 c] Bills receivable......Dr. 10,100 d] Drawee A/c.....Dr 10,100 To Drawee's A/c 10,100 To Bank A/c 10,100

20. What is the rectification entry for transaction six?

a] Wages &Salaries A/c.....Dr. 9,800 To Bank A/c 9,800

b] Machinery A/c......Dr. 9,800 To Wages &Salaries A/c 9,800

c] Machinery A/c.....Dr. 9,800 To Bank A/c 9,800

d] No Entry



Section-B - Mercantile Law Number of Questions - 10 Total Marks - 10

DIRECTIONS for questions 21 to 30: Choose the correct alternative.

21.	Which of the	following is	an	exception	to	the	rule	that	"an	agreement	in	restraint	of	trade	is
	void"?														

- a] Agreement in restraint of marriage
- b] Agreement in restraint of carrying of trade after sale of goodwill
- c] Agreement in restraint of legal proceedings
- d] Agreements of trading with enemy
- 22. Remission is the acceptance of:
 - a] a lesser sum than what was contracted for
 - b] a lesser fulfillment of the promise made.
 - c] Either [a] or [b]
 - d] Neither [a] nor [b]
- 23. Henry entered into a hire purchase agreement with Sam in relation to a television for Rs.20,000/- on condition that on paying 12 installments of Rs.2,000/- each the TV would be the property of Henry. After paying 6 installments Henry pledged the television with Richard, who took it in good faith. Sam wants to recover the television from Richard. Which of the following statement(s) is/are correct?
 - al Sam can recover the television from Richard.
 - bl Sam cannot recover the television from Richard.
 - c] Sam can only recover the price of the television from Henry.
 - d] Henry can validly transfer the title of the television to Richard.
- 24. Cundy V. Lindsay case deals with:
 - a] Coercion
 - bl Undue Influence.
 - c] Mistake as to the nature of transaction.
 - d] Mistake as regards identity.
- 25. When the performance of a contract becomes impossible, the purpose which the parties had in mind is frustrated. If the purpose becomes impossible because of supervening event, the promisor is excused from the performance of the contract. This is known as _____.
 - a] Doctrine of frustration.

b] Initial impossibility.

c] Lapse of time.

d] Operation of law.





- 26. Which of the following is NOT considered as an exception to the doctrine of caveat emptor?
 - a] where the seller knowingly conceals the defect which could be discovered on a reasonable examination.
 - b] where sale is by description and sample
 - c] where buyer has disclosed the purpose
 - d] where goods are bought by description from a seller dealing in goods of that description.
- 27. Which is not correct?
 - a] unless otherwise agreed, each of joint promisors may compel every other joint promisor to contribute equally with himself to the performance of the promise.
 - b] If anyone of the joint promisors makes default in making contribution, the remaining joint promisors must bear the loss arising from such default equally.
 - c] A release of one of the joint promisors by the promisee does not discharge the other joint promisor.
 - d] A release of one of the joint promisors by the promisee frees joint promisor so released from responsibility to the other joint promisor (s).
- 28. X, Y and Z are partners in a software business. They jointly promise to pay Rs.30,000 to A. Over a period of time Y became insolvent, but his assets are sufficient to pay 1/4' of his debts. Z is compelled to pay the whole.
 - a] Z has to bear the entire amount of liability
 - b] X has to bear the entire loss arising out of Y's insolvency
 - c] X and Z have to bear equally, the loss arising out of Y's insolvency
 - d] Z can recover back the entire amount from A.
- 29. Mr.X purchased a used computer from Mr. Y thinking it as a computer imported from England, Mr. Y failed to disclose the fact to Mr. X. On knowing the fact Mr. X wants to repudiate the contract. Which of the following statement is correct?
 - a] Mr. X can repudiate the contract on the ground of fraud.
 - b] Mr. X can repudiate the contract on the ground of misrepresentation.
 - c] Mr. X cannot repudiate the contract.
 - d] Mr. X can repudiate the contract on the ground of mistake.
- 30. The foundation of modern law of damages was laid down in:
 - a] Tinn v. Hoffman.

b] Taylor v. Caidwell.

c] Hadley v. Baxendale.

d] Addis v. Gramophone Co.

END OF SESSION-I



SESSION-II

Section-C - General Economics

Number of Questions - 15 Total Marks - 15

DIRECTIONS for questions 31 to 45: Choose the correct alternative.

- 31. How do we define Gross National Product at Market Price?
 - a] It is the market value of final goods and services produced in the domestic territory of a country by normal residents during an accounting year including net factor income from abroad
 - b] It is defined as the market value of output of final goods and services produced by normal residents of an economy in its domestic territory during an accounting year exclusive of depreciation and inclusive of net factor income from abroad
 - c] It is defined as the market value of final goods and services produced in the domestic territory for a country by its normal residents and non residents during an accounting year less of depreciation.
 - d] None of these.
- 32. Arc elasticity of demand can be defined as follows:
 - a] Price elasticity at a single point on the demand curve
 - b] Price elasticity of demand between two points on the demand curve
 - c] Both [a] and [b]
 - d] None of these
- 33. Which of the following conditions must be satisfied for the consumer to be in equilibrium?

a]
$$\frac{MUx}{MUy} > \frac{Px}{Py}$$

$$\text{a]} \quad \frac{MUx}{MUy} > \frac{Px}{Py} \qquad \quad \text{b]} \quad \frac{MUx}{MUy} < \frac{Px}{Py} \qquad \quad \text{c]} \quad \frac{MUx}{MUy} = \frac{Px}{Py} \qquad \quad \text{d] None of these}$$

$$c$$
] $\frac{MUx}{MUy} = \frac{Px}{Py}$

- Which principle of Financial Inclusion has been adopted in the 2008-09 Budget? 34.
 - a] Commercial Banks to include at least 250 rural households
 - b] To include retired bank officials, ex-service men to act as Business Correspondents
 - c] Both [a] and [b]
 - d] None of these
- 35. An example of double counting in national income would be:
 - a] Wages of bus and train driver
 - b] Cotton output and cotton cloth output
 - c] Electricity output and solar output
 - d] Tax receipts and earning of Inland Revenue officials



- 36. TRIPs means:
 - a] Trade related intellectual properties
 - b] Trade related investment properties
 - c] Trade related Indian properties
 - d] Trade related international Payments
- 37. Which theory of Consumer Behavior explains the Giffen Paradox?
 - a] Marshall's Theory

b] Hick's Theory

c] Both [a] and [b]

d] None of these

- 38. 'Market Period' refers to:
 - a] The period in which the producers of a good cannot change the quantity produced in response to a change in price
 - b] The period in which the producers of a good can change the costs of the quantity produced in response to a change in price
 - c] The time it takes for the market to attain equilibrium
 - d] The time it takes for the consumers to respond to change in the price
- 39. What is the approximate length of the National Highways of India?
 - a] 66,590 km
- b] 24,268 km
- c] 42,344 km
- d] 12,468 km

- 40. The LAC curve:
 - al falls when the LMC curve falls
 - b] rises when the LMC curve rises
 - c] passes through the lowest point of the LMC curve
 - d] falls when LMC < LAC and rises when LMC > LAC
- 41. What is Phillips Curve?
 - a] A tradeoff between the rate of unemployment and the rate of inflation in an economy.
 - b] A tradeoff between the rate of money supply growth and GDP growth in an economy.
 - c] A tradeoff between the rate of unemployment and the rate of literacy in the economy.
 - d] A tradeoff between the rate of GDP growth and the rate of inflation in the economy.
- 42. M1 in the money stock refers to:
 - a] Post office saving deposits
 - b] Currency plus demand deposits plus other deposits with RBI
 - c] Time Deposits with Banks
 - d] National Savings certificates



- 43. Adam Smith's concept of invisible hand postulates the following:
 - a] Putting in place a system of government regulations and control is most conducive to promoting the interests of the society
 - b] An individual pursuing his own self-interest tends to promote the good of his community as well.
 - c] Having a system of public enterprises side by side with private enterprises is most conducive to promoting the interests of society
 - d] By perusing the interests of marginalized sections of the population it is possible to promote the good of the society
- 44. Mahalanobis model stressed upon the establishment of:
 - a] Consumer goods industries
- b] Export oriented industries

c] Agro based industries

- d] Capital and basic goods industries
- 45. When is an allocation said to be Pareto Efficient?
 - a] There is no other allocation in which some other individual is better off and no individual is worse off
 - b] The disadvantaged sections of the society are better off.
 - c] The administrative cost involved is minimum
 - d] The tax burden is equitable distributed.



Section-D - Quantitative Aptitude

Number of Questions - 20 Total Marks - 20

DIRECTIONS for questions 46 to 65: Choose the correct alternative.

If $y = \sqrt{\sin x + \sqrt{\sin x + \sqrt{\sin x + \dots + \infty}}}$, then the value of $\frac{dy}{dx}$ is:

- b] $\frac{\sin x}{y+1}$ c] $\frac{\cos x}{2y+1}$

If the coefficient of correlation between the two variables, X and Y, is 0.5, their covariance 47. is 10 and the variance of X variate is 25, find the standard deviation of Y variate.

a] 6

- b] 3
- c] 5
- d] 4

48. $\frac{d}{dx}(\cos^{-1}x + \sin^{-1}x) = ?$

- b] 0
- d] None of these

In measuring reaction time, a psychologist estimated that the standard deviation is 1.08 seconds. 49. What should be the size of the sample in order to be 99% confident that the error of her estimates of mean would not exceed 0.18 seconds?

- a] 280
- b] 340
- c] 180
- d] 240

The first term of an AP is 17, the last term is $-12\frac{3}{8}$ and the sum of all terms is $25\frac{7}{16}$. 50. Find the common difference.

- a] $-\frac{235}{80}$

- b) $\frac{235}{80}$ c) $\frac{235}{40}$ d) $-\frac{235}{40}$

Calculate the regression coefficients for the following information: 51.

 $\sum X = 50$, $\sum Y = 30$, $\sum XY = 1000$, $\sum X^2 = 3000$, $\sum Y^2 = 180$, N = 10.

- a] 0.463, 0.512 b] 0.309, 0.497 c] 0.497, 0.213
- dl 0.309, 0.621

 $\lim_{n\to\infty} \left[\frac{1}{1-n^2} + \frac{2}{1-n^2} + \dots + \frac{n}{1-n^2} \right] = ?$

a] 0

- b] $-\frac{1}{2}$ c] $\frac{1}{2}$
- d] None of these



- 53. It is known that 30% of the population was educated in the year 1963 and 55% in the year 1983. If the percentage of educated population depends linearly upon the year, then the estimated educated population in the year 2003 is?
 - a] 70%
- b] 80%
- c] 90%
- d] 75%
- 54. A two-digit number is such that the units digit is 2 more than its tens digit. Find the number, if the positive difference between the number and number formed by interchanging the digits is 5 more than the number itself.
 - a] 13

- b1 24
- c] 35
- d1 57
- 55. Calculate Laspeyre's index number of price from the following data

	Base Yea	ar (2004)	Current Y	ear (2005)
	Kilo	Rate (Rs)	Kilo	Rate (Rs)
Wheat	10	3	8	3.25
Sugar	20	15	15	20
Rice	2	25	3	23

- a] 136.5
- b] 112.4
- c] 162.8
- d] 125.9
- 56. If $a = \sqrt[3]{\sqrt{2} + 1} \sqrt[3]{\sqrt{2} 1}$, then : $a^3 + 3a 2 = ?$
 - a] 3

- b] 0
- c] 2
- d] 1
- 57. The average number of customers, who appear at a counter of a certain bank per minute is two. Find the probability that during a given minute three or more customers appear.

[Given that $e^{-2} = 0.1353$]

- a] 0.5235
- b] 0.2235
- c] 0.4235
- d] 0.3235
- 58. If m = a + b, n = b + c, p = c + a, then : $\sqrt[m]{\frac{x^{a^2}}{x^{b^2}}} \times \sqrt[n]{\frac{x^{b^2}}{x^{c^2}}} \times \sqrt[p]{\frac{x^{c^2}}{x^{a^2}}} = ?$
 - a] -1
- b] 0
- c] 1
- d] 2
- 59. An electronic device is made up of three components A, B and C. The probability of the failure of component A is 0.01, that of B is 0.1 and that of C is 0.02 in some fixed period of time. Find the probability that the device will work satisfactorily during that period of time assuming that the three components work independently of one another.

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- al 0.953
- b] 0.783
- c] 0.721
- d] 0.873



60.
$$\int \frac{dx}{(1+x^2)\sqrt{1-x^2}} = ?$$

a]
$$\frac{1}{2} \tan^{-1} \left(\frac{\sqrt{2}x}{\sqrt{1-x^2}} \right) + C$$

b]
$$\frac{1}{\sqrt{2}} \tan^{-1} \left(\frac{\sqrt{2}x}{\sqrt{1+x^2}} \right) + C$$

c]
$$\frac{1}{\sqrt{2}} \tan^{-1} \left(\frac{\sqrt{2}x}{\sqrt{1-x^2}} \right) + C$$

61. Out of a consignment of 10000 tennis balls, 200 were selected at random and examined and it was found that 20 of these were defective. How many defective balls can you reasonably expect to have in the whole consignment at 95% confidence level?

[Z at 95% confidence level = 1.96]

- a] 588 to 1412
- b] 1000 to 1412
- c] 588 to 1000
- d] 678 to 1312
- 62. The following results were obtained from the analysis of data on two variables X and Y: $\overline{X} = 20$, $\overline{Y} = 15$, Standard deviation of X = 4, Standard deviation of Y = 3; r, the Coefficient of correlation = 0.7. Obtain the likely value of Y, when X = 24.
 - a] 15.7
- b] 16.3
- cl 18.2
- d] 17.1
- 63. Calculate the value of median for the data given below:

Income ('000)	0 - 1	1-2	2-3	3-5	5-10	10-25	25-50	50-100	100-1000
No. of persons	13	90	81	117	66	27	6	2	2

- a] 3308
- b] 3715
- cl 2937
- d] 4153
- 64. A problem in statistics is given to two students A and B. The odds in favour of A solving the problem are 6 to 9; and against B solving the problem are 12 to 10. If A and B attempt, find the probability of the problem being solved.
 - a] $\frac{18}{55}$
- b] $\frac{37}{55}$
- c] $\frac{28}{55}$
- d] $\frac{27}{55}$
- 65. A population has a mean of 159.7 cms. and standard deviation of 4.5 cms. How large a sample would be necessary to make the standard error of the mean less than 0.5 cm?
 - a] 81
- b] 9
- c] 27
- d] 3