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OR

pkj et 800 :i; e [kjhnh xbA mle l nk dk 500 :i; e vkj 'k"k nk dk 250 :- e cpk x;kA ykHk ;k gkfu dk ifr'kr Kkr djkA

Four tables were purchased for Rs.800. Two of them were sold for Rs.500. and other two for Rs. 250. Find out the percentage of profit or loss.

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Roll No..... **Total No. of Sections : 03**

Total No. of Printed Pages : 06

Code No. : B-134

Annual Examination - 2018

B.Com. Part - I

GROUP-I ACCOUNTING

Paper - II

BUSINESS MATHEMATICS

Max.Marks : 75

Time : 3 Hrs. **Min.Marks : 25**

Vhi % **[k.M ^v* e nl vfry?kZkjh i'u gS] ftUgsa gy djuk vfuok;Z gSA [k.M ^c* e y?kZkjh ç'u ,oa [k.M ^l* e nh?kZ mŸkjh ç'u gSA [k.M ^v* dk lcl igyw gy djsaA**

Note : Section 'A', containing 10 very short-answer-type questions, is compulsory. Section 'B' consists of short-answer-type questions and Section 'C' consists of long-answer-type questions. Section 'A' has to be solved first.

Section - 'A'

fuEukfdr vfry?kZkjh ç'uksa d mŸkj ,d ;k nks okD;ksa e nsaA

Answer the following very short-answer-type questions in one or two sentences. **(1x10=10)**

ç'u 1- fuEukfdr y?kx.kd dk ifry?kx.kd Kkr dhft, :

Find the anti logarithms of the following logarithms :

$\bar{2}.5051$

ç'u 2- fuEukfdr lw[;kvksa dk vkSlr Kkr djsa&

Find out the average of the following data:

50, 50.425, 5.0425, 0.50425, 0.053245.

ç'u 3- vk0;wg dk ifjHkkf"kr dhft,A

Define Matrix.

ç'u 4- vfn'k vk0;wg D;k gS\

What is Scalar Matrix?

P.T.O.

ç'u 5- ,d ifr;kxh ijh{kk e 'kjn u 84 vd rFkk idk'k u 72 vd ikIr fd,A 'kjn rFkk idk'k d ikIrkdk dk vuikr Kkr dhft,A

In a competitive examination, Sharad scored 84 marks and Prakash 72, find the ratio between the marks of Sharad and Prakash.

ç'u 6- fuEufyf[kr jkf'k;k e vuikr Kkr dhft, :

Find the ratio between the following quantities :

3/4 and 7/2

ç'u 7- pØof) C;kt l vki D;k le>r g\

What do you understand by compound interest?

ç'u 8- 40]000 :i; dk 5% okf"kd nj l 3 o"k dk pØof) feJ/ku Kkr dhft,A

Find the compound amount on Rs. 40,000 at 5% per annum in 3 year.

ç'u 9- fuEufyf[kr ifr'kr dk fHkUu e cnfy, %&

Conrert the following percent into fraction :-

$$33\frac{1}{3}\%$$

ç'u 10- ,d ,tUV fcØh ij $5\frac{1}{2}\%$ dh nj l 2750 :i; deh'ku dk vf/kdkjh gA fcØh Kkr dhft,A

An agent is entitled to get Rs. 2750 as commission at $5\frac{1}{2}\%$ on the sales

Find the amount of sales.

Section - 'B'

fuEukfdr y?k mÙkjh; ç'uk d mÙkj nhft, %

Answer the following short-answer-type questions : (5x5=25)

ç'u 1- fuEufyf[kr Qyu dk x d lki{k vodfyr dhft,&

Differentiate the following function with respect to x : $2\sqrt{x^2-7x+4}$

OR

A^2 rFkk AB dh x.kuk dhft, ;fn&

Calculate A^2 and AB if -

$$A=\begin{bmatrix}2 & 3 & 4\\ 1 & 2 & 3\\ 1 & -1 & 2\end{bmatrix} \text{ and } B=\begin{bmatrix}1 & 3 & 2\\ -1 & 0 & 1\\ 0 & 0 & 3\end{bmatrix}$$

ç'u 3- ,d 35 ik.M d feJ.k e 60% duu gA mle 'k) duu fdruh feykb tk; fd feykoV dy dh 35% gk tk;A

In a 35 lbs mixture, the percentage of quinine is 60%. How much pure quinine should be added to the mixture so that the adulteration is 35% of the total?

OR

j[kh; iØeu l vki D;k le>r g\ j[kh; iØeu d egRo ,oe lhekvk dh foopuk dhft,A

What do you understand by Linear Programming? Discuss the importance and limitations of linear programming.

ç'u 4- dku lk /ku 8% pØof) C;kt dh nj l 2 o"kk e 7]290 :i; gk tk;xk\

What sum will amount to Rs. 7,290 in 2 years at 8% per annum compound interest?

OR

,d cpr [kkr e 1]500 :- tek gA 12% okf"kd pØof) C;kt dh nj l 2 o"k ckn 'k"k D;k gkxk] ;fn C;kt dh x.kuk =ekfld gA

There are Rs. 1500 in savings account. What will the balance be after two years, if the rate of interest is 12% per annum and the interest is compounded quarterly.

ç'u 5- ,d O;fä dk ,d jfM;k 550 :- e cpu ij 12% gkfu gkrh gA ;fn jfM;k 700 :i; e cpk tkrk g] rk ykHk dk ifr'kr Kkr djkA

A man suffers a loss of 12% by selling a radio for Rs. 550. If the radio is sold for Rs. 700, find the percentage of profit.

P.T.O.

OR

fuEufyf[kr dk y?kx.kd dh lgk;rk l eku Kkr dhft, :-

Find the values of the following with the help of logarithms :-

7.2 x 8.3 x 0.94

ç'u 2- A+B dk eku Kkr dhft,] ;fn

Find the value of A+B, if

$$A=\begin{bmatrix}3 & 2 & 5\\ 4 & 6 & 3\end{bmatrix},\quad B=\begin{bmatrix}4 & 3 & 7\\ 2 & 1 & 4\end{bmatrix}$$

OR

fdUgh nk vk0;g d x.kk dju dh ifØ;k crkb;A

Explain the procedure of the multiplication of any two matrix.

ç'u 3- v rFk c dh okf"kd vk; 4%3 d vuikr e g vkj mu d 0;; dk vuikr 3%2 gA ;fn o"k d vUr e iR;d d ikl 600 :i; cpr g] rk iR;d dh okf"kd vk; crykb;A

The income of A and B is in the ratio of 4:3 and their expenditure is in the ratio of 3:2. If each of them saves Rs. 600 at the end of the year, find the annual income of each.

OR

fdlh fuf'pr le; e 12 0;fä 18 dfl;k cukr gA mru gh le; e 10 0;fä fdruh dfl;k cuk ldx\

12 men make 18 chairs in a certain time. How many chairs will be made by 10 men in the same time?

ç'u 4- 1]500 :i; dk 5% ifr o"k dh nj l 3 o"kk dk pØof) C;kt o feJ/ku Kkr djkA

Calculate the compound interest and amount on Rs. 1500 at 5% per annum in 3 years.

OR

1]000 :i; dk $2\frac{1}{2}$ o"k dk 10% okf"kd dh nj l feJ/ku Kkr djkA

Find the amount on Rs. 1,000 @ 10% p.a. in $2\frac{1}{2}$ years.

P.T.O.

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OR

fuEufyf[kr dk y?kx.kd dh lgk;rk l eku Kkr dhft, :-

Find the values of the following with the help of logarithms :-

7.2 x 8.3 x 0.94

ç'u 2- A+B dk eku Kkr dhft,] ;fn

Find the value of A+B, if

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OR

fdUgh nk vk0;g d x.kk dju dh ifØ;k crkb;A

Explain the procedure of the multiplication of any two matrix.

ç'u 3- v rFk c dh okf"kd vk; 4%3 d vuikr e g vkj mu d 0;; dk vuikr 3%2 gA ;fn o"k d vUr e iR;d d ikl 600 :i; cpr g] rk iR;d dh okf"kd vk; crykb;A

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Find the amount on Rs. 1,000 @ 10% p.a. in $2\frac{1}{2}$ years.

P.T.O.

ç'u 5- fdlh 'kgj dh tul[;k rhu o"kZ rd yxkrkj 8% okf"kZd c<+rh jgh gA ;fn izkjEHk e tul[;k 55]000 gk rk rhljs o"kZ d vUr e tul[;k crkb;sA

The population of a city increases 8% annually. If the population at the beginning is 55,000 find the population at the end of third year.

OR

,d vfHkdrk fdlh oLrq dh fcØh ij 8% deh'ku ikrk gA ;fn dy fcØh 48]000 :i;s gk rk mldk deh'ku Kkr dhft,A

An agent gets 8% commission on sale price of goods. Find the amount of his commission, if the total sale is of Rs. 48,000.

Section - 'C'

fuEukfdr nh?k mÙkjh; ç'uk d mÙkj nhft, %

Answer the following long-answer-type questions (8x5=40)

ç'u 1- y?kqx.kd lkj.kh dh lgk;rk l fuEukfdr dk eku Kkr dhft,&

Find the value of the following with the help of logarithm-

$$\frac{5.856\times 0.007161}{0.06253}$$

OR

fuEufyf[kr Qyu dk x d lki{k vodyu Kkr dhft,&

Find the derivative of the following function with respect to x-

$$x\left(2x^2+1\right)e^x$$

ç'u 2- ;fn $A=\begin{bmatrix}-1 & -2 & 3\\ 4 & 2 & 5\end{bmatrix}$ rFkk $B=\begin{bmatrix}2 & 3\\ 4 & 5\\ 2 & 1\end{bmatrix}$ rk AB rFkk BA Kkr djk

vkj fl) djk fd $AB \neq BA$

If $A=\begin{bmatrix}-1 & -2 & 3\\ 4 & 2 & 5\end{bmatrix}$ and $B=\begin{bmatrix}2 & 3\\ 4 & 5\\ 2 & 1\end{bmatrix}$ then find AB and BA and prove

that $AB \neq BA$

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ç'u 5- fdlh 'kgj dh tul[;k rhu o"kZ rd yxkrkj 8% okf"kZd c<+rh jgh gA ;fn izkjEHk e tul[;k 55]000 gk rk rhljs o"kZ d vUr e tul[;k crkb;sA

The population of a city increases 8% annually. If the population at the beginning is 55,000 find the population at the end of third year.

OR

,d vfHkdrk fdlh oLrq dh fcØh ij 8% deh'ku ikrk gA ;fn dy fcØh 48]000 :i;s gk rk mldk deh'ku Kkr dhft,A

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Section - 'C'

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Answer the following long-answer-type questions (8x5=40)

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vkj fl) djk fd $AB \neq BA$

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that $AB \neq BA$