ARMY PUBLIC SCHOOL JAMMU CANTT

HOLIDAYS HOMEWORK SESSION 2019-20 **CLASS- XII**

ENGLISH

Q1.Write an article on " Poverty the Root cause of all Evils".

Q2. Practice the writing skills.(short compositions)

Q3. Revise the syllabus done in the class.(flamingo and vistas)

Q4.Make Poster on Slum Life (Blot on Society).

Q 5. All we have to Fear is Fear itself. Elucidate.

COMPUTER SCIENCE:

(CS with Python)

Assignments based on the following Chapters:

Chapter 4: Functions and Libraries

Chapter 5: Data File Handling

Chapter 6:

Complete Chapters 4 to 6 of "COMPUTER SCIENCE Practical Book":

(CS with C++)

Assignments based on the following Chapters:

Chapter 4: Classes and Objects

Chapter 5: Constructors and Destructors

Chapter 6: Inheritance: Extending Classes

Complete the Practical Problems for Chapters 4 to 6.

PHE

THEORY:

Prepare the following Chapters:

1. Planning in Sports
2. Training in Sports
3. Nutrition in Sports
4. Yoga and Life Style

PRACTICAL: Prepare a file on Yogic Practices

NCC

Do the exercise questions of the following chapters:- common :- Weapon Training
Special Subject:- Fieldcraft and Battle craft

ECONOMICS

THEORY: Prepare the following chapters:

UNIT-I NATIONAL INCOME AND RELATED AGGREGATES

1. What is macro economics?
2. Basic concept in macro economics.
3. Circular flow of income and method of measuring national income.
4. Aggregates related to national income.
5. GDP and welfare

UNIT -II GOVERNMENT BUDGET AND ECONOMY

1. Government budget- meaning, objectives and components
2. Classification of receipt – revenue and capital receipt
3. Classification of expenditure – revenue and capital expenditure.
4. Measures of government deficit.

PRACTICAL: Prepare a file on project work.

MATHEMATICS

CHAPTER: 1. RELATIONS AND FUNCTIONS

1. If R_1 *and* R_2 are equivalence relations in a set A , show that $R_1 \cap R_2$ is also an equivalence relation.

2. Let R be the relation on set A of ordered pairs of positive integers defined by (x , y) R ((u , v) if and only if xv = yu. Show that R is an equivalence relation.

3.Let X = { 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 }.Let R_1 be a relation in X given by R_1 = {(x , y) : x – y is divisible by 3} and R_2 be another relation on X given by R_2 = {(x , y) : { x , y } is a subset of { 1 , 4 , 7} or { x , y } is a subset of { 2 , 5 , 8 } or { x , y } is a subset of { 3 ,6 ,9 }.Show that $R_1 = R_2$.

4. Let A = { 1 , 2 , 3 }. Then show that the number of relations containing (1 , 2) and (2 , 3) which are reflexive and transitive but not symmetric is four.

5. Show that the number of equivalence relations in the set { 1 , 2, 3 } containing (1 , 2) and (2 , 1) is two.

6. Consider a function f : [0 , $\frac{\pi}{2}$] → R given by f(x) = sinx and g : [0 , $\frac{\pi}{2}$] → R given by g(x) = cosx. Show that f and g are one one but f + g is not one one.

7. Show that the relation ' is a factor of ' on the set N of all natural numbers is reflexive and transitive but not symmetric.

8. Let f,g: R → R be defined as f(x) = $|$ x $|$ and g(x) = [x] , where [x] denotes the greatest integer function less than or equals to x. Find fog ($\frac{5}{2}$) and gof (- $\sqrt{2}$).

9. If f : A → B and g: B → C are onto functions , then show that gof: A → C is also onto.

10. If f(x) = $\frac{x-1}{x+1}$, ($x \neq 1, -1$), show that f o f^{-1} is an identity function.

11. If the function f : R → R is given by f(x) = $\frac{x+3}{2}$ and g : R → R is given by g(x) = 2x – 3 , find fog and gof. Is f^{-1} = g .

12. Given the functions f(x) = sinx and g(x) = cosx are one one in [0 , $\frac{\pi}{2}$]. Prove that f + g is not one one in [0 , $\frac{\pi}{2}$].

13. If f : R – {2} → R – {3} is defined by f(x) = $\frac{3x+1}{x-2}$, where R is the set of real numbers , then show that f is invertible and hence find the value of f^{-1}.

(Ans. e = 0 ∈ X is an identity element for X. Inverse of x ∈ X *is* $\frac{-x}{1+x}$)

14. If N denote the set of all natural numbers and R be the relation on N X N defined by (a , b) R (c , d) , if ad(b + c) = bc(a + d). Then show that R is an equivalence relation.

15. Let f:N→R be a function defined as f(x) = $4x^2$+12x+15 .Show that f:N→ s, where s is range of f ,is invertible. Find also the inverse of f.

16. Let f : R → R be the signum function defined as $f(x) = \begin{cases} 1 \; if \; x > 0 \\ 0 \; if \; x = 0 \\ -1 \; if \; x < 0 \end{cases}$ and g:R→ R be the greatest integer function given by g(x)= [x], where [x] is is the greatest integer less than or equal to x. Does fog and gof coincide in [0,1]?

CHAPTER: 2. INVERSE TRIGONOMETRIC FUNCTIONS

1. Find the value of $tan^{-1}\left(\frac{x}{y}\right) - tan^{-1}\left(\frac{x-y}{x+y}\right)$.

2. If $a_1 , a_2 , a_3 , \dots\dots\dots , a_n$ be an arithmetic progression with common difference d, then evaluate the following expression

tan$[tan^{-1}\left(\frac{d}{1+ a_1.a_2}\right) + tan^{-1}\left(\frac{d}{1+ a_2.a_3}\right) + tan^{-1}\left(\frac{d}{1+ a_3.a_4}\right) + \cdots\dots\dots\dots + tan^{-1}\left(\frac{d}{1+ a_{n-1}.a_n}\right)]$.

3. Solve for x , if $tan^{-1} 2x + tan^{-1} 3x = \frac{\pi}{4}$.

4. Solve for x , $tan^{-1}(x + 1) + tan^{-1}(x - 1) = tan^{-1}\frac{8}{31}$

5. Prove that $sin^{-1}\frac{4}{5} + sin^{-1}\frac{5}{13} + sin^{-1}\frac{16}{65} = \frac{\pi}{2}$

6. Prove that $cos^{-1}\frac{12}{13} + sin^{-1}\frac{3}{5} = sin^{-1}\frac{56}{65}$

7. Solve for x: $\tan^{-1}(x - 1) + \tan^{-1} x + \tan^{-1}(x + 1) = \tan^{-1} 3x$

8. Prove that $\tan^{-1}\left(\frac{6x-8x^3}{1-12\,x^2}\right) - \tan^{-1}\left(\frac{4x}{1-\,4x^2}\right) = \tan^{-1} 2x \; ; \; |2x| < \frac{1}{\sqrt{3}}$

9. Prove that $2\tan^{-1}\frac{1}{5} + \sec^{-1}\frac{5\sqrt{2}}{7} + 2\tan^{-1}\frac{1}{8} = \frac{\pi}{4}$

10. Show that $\cos\left(2\,\tan^{-1}\frac{1}{7}\right) = \sin\left(4\tan^{-1}\frac{1}{3}\right)$

11. Find the value of x satisfying the equation $\cos^{-1}\left(\frac{x^2-1}{x^2+1}\right) + \frac{1}{2}\tan^{-1}\left(\frac{2x}{1-x^2}\right) = \frac{2\pi}{3} , x > 0$

12. Solve the equation $\tan^{-1}(\frac{2x}{1-x^2}) + \cot^{-1}\left(\frac{1-x^2}{2x}\right) = \frac{\pi}{3} , x > 0$

13. Find the value of x , if $\sin^{-1} 6x + \sin^{-1} 6\sqrt{3}x = -\frac{\pi}{2}$

14. Prove that $2\sin^{-1}\frac{3}{5} - \tan^{-1}\frac{17}{31} = \frac{\pi}{4}$

15. Prove the following: $\cot^{-1}\left(\frac{xy+1}{x-y}\right) + \cot^{-1}\left(\frac{yz+1}{y-z}\right) + \cot^{-1}\left(\frac{zx+1}{z-x}\right) = 0 , (0 < xy , yz , zx < 1)$

16. Show that $tan^{-1}1 + tan^{-1}2 + tan^{-1}3 = 2\left(tan^{-1}1 + tan^{-1}\frac{1}{2} + tan^{-1}\frac{1}{3}\right)$

17. Show that $\cot^{-1} 1 + \cot^{-1} 2 + \cot^{-1} 3 = \frac{\pi}{2}$

18. If $\sin[\cot^{-1}(x + 1)] = \cos(\tan^{-1} x)$, then find the value of x.

19. If $(\tan^{-1} x)^2 + (\cot^{-1} x)^2 = \frac{5\pi^2}{8}$, then find the value of x.

20. Prove that $\sin^{-1}(\frac{4}{5}) + \sin^{-1}(\frac{5}{13}) + \sin^{-1}(\frac{16}{65}) = \frac{\pi}{2}$

21. Solve $\sin^{-1}\frac{5}{x} + \sin^{-1}\frac{12}{x} = \frac{\pi}{2}$

22. Solve $\sin^{-1}(1 - x) - 2\sin^{-1} x = \frac{\pi}{2}$

23. Solve $\sin^{-1} x + \sin^{-1} 2x = \frac{\pi}{3}$

24. Solve $\cos^{-1}(\frac{a}{x}) - \cos^{-1}(\frac{b}{x}) = \cos^{-1}(\frac{1}{b}) - \cos^{-1}(\frac{1}{a}) , \; |\,a\,| \le 1 , \; |\,b\,| \le 1$

25. Solve $\sin^{-1} x + \sin^{-1}(1 - x) = \cos^{-1} x$

26. Solve cos ($\tan^{-1} x$) = sin ($\cot^{-1} \frac{3}{4}$)

27. Prove that $2 \tan^{-1} (\tan \frac{\alpha}{2} \tan(\frac{\pi}{4} - \frac{\beta}{2})) = \tan^{-1} (\frac{\sin\alpha \cos\beta}{\sin\beta + \cos\alpha})$

28.Prove that $cos^{-1} \left[\frac{cos\alpha + cos\beta}{1 + cos\alpha . cos\beta} \right] = 2\, tan^{-1} \left(tan\frac{\alpha}{2}\, tan\frac{\beta}{2} \right)$

29.Write into simplest form : $sin^{-1} \left[\sqrt{x}\sqrt{1 - x^2} - x\sqrt{1 - x} \right]$.

30.Solve the equation sin [$2\, cos^{-1}$ (cot($2\, tan^{-1}x$))] = 0.

CHAPTER: 3 & 4. MATRICES AND DETERMINANTS

1. Let A = $\begin{bmatrix} 2 & 3 \\ 2 & \end{bmatrix}$ and f(x) = $x^2 - 4x + 7$. Show that f(A) = 0 and use this result to find A^5. -1

2. Using properties of determinants, prove that $\begin{vmatrix} a & b & c \\ a-b & b-c & c-a \\ b+c & c+a & a+b \end{vmatrix} = a^3 + b^3 + c^3 - 3abc$

3. For what value of x , the matrix A is singular , if A = $\begin{bmatrix} 1+x & 7 \\ 3-x & 8 \end{bmatrix}$?

4. Using properties of determinants , prove that $\begin{vmatrix} a & a+b & a+b+c \\ 2a & 3a+2b & 4a+3b+2c \\ 3a & 6a+3b & 10a+6b+3c \end{vmatrix} = a^3$

5. Show that the triangle ABC is an isosceles triangle if the determinant
$\begin{vmatrix} 1 & 1 & 1 \\ 1+cosA & 1+cosB & 1+cosC \\ cos^2A + cosA & cos^2B + cosB & cos^2C + cosC \end{vmatrix} = 0$

6. For a 3X3 matrix A, given that $|A| = 3$, then find $|adj(A)|$.

7. If A = $\begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$ and B = $\begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ then find BA and use this to solve the system of equations x – y = 3 , 2x + 3y + 4z = 17 and y + 2z = 7.

Prove the following

8. $\begin{vmatrix} b^2c^2 & bc & b+c \\ c^2a^2 & ca & c+a \\ a^2b^2 & ab & a+b \end{vmatrix} = 0$

9. $\begin{vmatrix} -bc & b^2 + bc & c^2 + bc \\ a^2 + ac & -ac & c^2 + ac \\ a^2 + ab & b^2 + ab & -ab \end{vmatrix} = (bc + ca + ab)^3$

10. $\begin{vmatrix} (b+c)^2 & ab & ca \\ ab & (a+c)^2 & bc \\ ac & bc & (a+b)^2 \end{vmatrix} = 2abc\,(a+b+c)^3$

11. Find the product AB , where A = $\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix}$ and B = $\begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$ and use it

to solve the equations x – y + z = 4 , x – 2y – 2z = 9 and 2x + y + 3z = 1.

12. If a , b , c are positive and unequal , show that the following determinant is negative:

$$\begin{vmatrix} a & b & c \\ b & c & a \\ c & a & b \end{vmatrix}$$

Using properties of determinants , solve the determinants for x:

13. $\begin{vmatrix} x-2 & 2x-3 & 3x-4 \\ x-4 & 2x-9 & 3x-16 \\ x-8 & 2x-27 & 3x-64 \end{vmatrix} = 0$

14. $\begin{vmatrix} a+x & a-x & a-x \\ a-x & a+x & a-x \\ a-x & a-x & a+x \end{vmatrix} = 0$

15. Using elementary transformations, find the inverse of $\begin{vmatrix} 1 & 2 & 3 \\ 2 & 5 & 7 \\ -2 & -4 & -5 \end{vmatrix}$

16. For what value of k, the matrix $\begin{bmatrix} 2-k & 4 \\ -5 & 1 \end{bmatrix}$ is not invertible?

17. Using properties of determinants show that $\begin{vmatrix} y+z & x & y \\ z+x & z & x \\ x+y & y & z \end{vmatrix}$ = (x + y + z) $(z-x)^2$.

18. If A is a matrix of order 2 x 3 and B is a matrix of order 3 x 5 , then what is the order of matrix $(AB)^T$?

19. Show that $\begin{vmatrix} a & b-c & c+b \\ a+c & b & c-a \\ a-b & b+a & c \end{vmatrix}$ = (a + b + c) ($a^2 + b^2 + c^2$).

20. A matrix of order 3 x 3 has determinant 6. What is the value of | 3A | ?

21. Find the matrix A satisfying the matrix equation $\begin{bmatrix} 2 & 1 \\ 3 & 2 \end{bmatrix}$ A $\begin{bmatrix} -3 & 2 \\ 5 & -3 \end{bmatrix}$ = $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

22.Let A = $\begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$, then show that $A^2 - 4A + 7I = 0$. Using this result calculate A^3.

23. In a Legislative assembly election, a political party hired a public relation firm to promote its candidate in three ways; telephone, house calls and letters. The numbers of contacts of each type in three cities A, B & C are (500, 1000, and 5000), (3000, 1000, 10000) and (2000, 1500, 4000), respectively. The party paid Rs. 3700, Rs.7200, and Rs.4300 in cities A, B & C respectively. Find the costs per contact using matrix method. Keeping in mind the economic condition of the country, which way of promotion is better in your view?

24. for keeping Fit **X** people believes in morning walk, **Y** people believe in yoga and Z people join Gym. Total no of people are 70.further 20% 30% and 40% people are suffering from any disease who believe in morning walk, yoga and GYM respectively. Total no. of such people is 21. If morning walk cost Rs 0 Yoga cost Rs 500/month and GYM cost Rs 400/ month and total expenditure is Rs 23000.
(i) Formulate a matrix problem.
(ii) Calculate the no. of each type of people.
(iii) Why exercise is important for health.

CHAPTER: 5. CONTINUITY AND DIFFERENTIABILITY

1. Discuss the continuity of the function f(x) = $\begin{cases} \frac{x}{|x|} \text{ , if } x \neq 0 \\ 1 \text{ , if } x = 0 \end{cases}$

2. Let f(x) = $\begin{cases} \frac{1-cos4x}{x^2} & if\ x < 0 \\ a \quad \text{if } x = 0 \\ \frac{\sqrt{x}}{\sqrt{16+\sqrt{x}}-4} & if\ x > 0 \end{cases}$

Determine the value of a , so that f(x) is continuous at x = 0.

3. If y = a (1 + cos θ) $and\ x = a\ (\theta - sin\theta), then\ find\ \frac{d^2y}{dx^2}$ at $\theta = \frac{\pi}{2}$

4. Discuss the continuity of the function f(x) = $\begin{cases} \frac{x}{|x|+2x^2} , x \neq 0 & \text{at x = 0} \\ 2 \text{ , x = 0} \end{cases}$

5. If cosy = x cos(a + y) and cosa $\neq$ 1 , $then\ prove\ that\ \frac{dy}{dx} = \frac{cos^2(a+y)}{sina}$

6. $If\ x\sqrt{1+y} + y\sqrt{1+x} = 0\ and\ x \neq y, then\ prove\ that\ \frac{dy}{dx} = \frac{-1}{(1+x)^2}$

7. For what values of a and b , the function f defined as f(x) = $\begin{cases} 3ax + b \text{ , if x } < 1 \\ 10 \text{ , if x = 1} \\ 3ax - 3b \text{ , if x } > 1 \end{cases}$ is continuous at x = 1?

8. $If\ x^y + y^x = a^b, then\ find\ \frac{dy}{dx}$

9. Using Langrange's mean value theorem , find a point on the curve y = $\sqrt{x-2}$ defined on the interval [2 , 3] , where the tangent is parallel to the chord joining the end points of the curve.

10. If y = ($\cot^{-1} x$)^2 , $then\ show\ that$ (1 + x^2)$^2 . \frac{d^2y}{dx^2} + 2x\ (1 + x^2)\frac{dy}{dx} = 2.$

11. If ($cosx$)^y = ($cosy$)^x , $then\ find\ \frac{dy}{dx}$.

12. For what value of k , is the function f(x) = $\begin{cases} \frac{1-cos4x}{8x^2} , if\ x \neq 0 \\ k \text{ , if x = 0} \end{cases}$ continuous at x = 0?

13. If f(x) and g(x) are two functions derivable in [a , b] such that f(a) = 4 , f(b) = 10 , g(a) = 1 and g(b) = 3 , then show that for a < c < b , $f'(c) = 3\ g'(c)$.

14. Verify the hypothesis and conclusion of Lagrange's mean value theorem for the function f(x) = $\frac{1}{4x-1}, 1 \leq x \leq 4.$

15. Verify Rolle's theorem for the function f(x) = $\log\left(\frac{x^2+ab}{(a+b)x}\right)\ in\ [a,b], where\ 0 < a < b.$

16. If f(x) = $\begin{cases} \frac{cos^2x - sin^2x - 1}{\sqrt{x^2+1}-1} , x \neq 0 \\ a \text{ , x = 0} \end{cases}$ is continuous at x = 0 , then find the value of a.

17. Find $\frac{dy}{dx}$, $when\ y = \sqrt{a + \sqrt{a + \sqrt{a + x^2}}}$, $where\ a\ is\ a\ constant$

18. Differentiate $cos^{-1}\left[\frac{1-x^2}{1+x^2}\right]\ w.r.t.\ tan^{-1}\left[\frac{3x-x^3}{1-3x^2}\right]$

19. If x = sint , y = sinkt , then show that (1 - x^2) $\frac{d^2y}{dx^2} - x\frac{dy}{dx} + k^2y = 0.$

20. Show that the function f(x) = | x - 1 | + | x + 1 | , $\forall\ x \in R$, $is\ not\ differentiable\ at\ the\ points\ x = -1\ and\ x = 1$

21. If y = $e^{m \sin^{-1} x}$, then show that (1 - x^2) $\frac{d^2y}{dx^2} - x\frac{dy}{dx} - m^2y = 0.$

22. If f(x) = $\sqrt{x^2+1}$, $g(x) = \frac{x+1}{x^2+1}$ $and\ h(x) = 2x-3$, $then\ find\ f\square[h\square\{g\square(x)\}]$.

23. Find the value of k for which

f(x) = $\begin{cases} \frac{\sqrt{1+kx}-\sqrt{1-kx}}{x} & \text{, if } -1 \leq x < 0 \\ \frac{2x+1}{2x-1}, & \text{if } 0 \leq x < 1 \end{cases}$

is continuous at x=0.

Ans. $\boldsymbol{k = -\frac{1}{2}}$

24. Find the value of a for which the function f is defined as

f(x) = $\begin{cases} a \sin\frac{\pi}{2}(x+1) & \text{, if } x \leq 0 \\ \frac{tanx-sinx}{x^3} & \text{, if } x > 0 \end{cases}$

is continuous at x=0.

Ans. $\boldsymbol{a = \frac{1}{2}}$

25. Find the relationship between a and b, so that the function f defined by

f(x) = $\begin{cases} ax+1, & \text{if } x \leq 3 \\ ax+b, & \text{if } x > 3 \end{cases}$

is continuous at x=3.

Ans. 3a -3b =2

26.Show that the function f(x) is defined by

f(x) = $\begin{cases} \frac{sinx}{x} + \cos x, & \text{if } x > 0 \\ 2, & \text{if } x = 0 \\ \frac{4(1-\sqrt{(1-x)}}{x}, & \text{if } x < 0 \end{cases}$

is continuous at x=0.

27. If f(x) defined by the following, is continuous at x=0, then find the values of a, b and c.

f(x) = $\begin{cases} \frac{\sin(a+1)x+sinx}{x}, & \text{if } x < 0 \\ c, & \text{if } x = 0 \\ \frac{\sqrt{x+bx^2}-\sqrt{x}}{bx^{\frac{3}{2}}}, & \text{if } x > 0 \end{cases}$

Ans. $\boldsymbol{a = -\frac{3}{2}, c = \frac{1}{2}, b \epsilon R - \{0\}}$

PHYSICS

All numerical exercises from Chapter No. 1 and 2
Solve all assignments pertaining to Chapter No. 1 and 2

POL SCIENCE

1. What is meant by logic of deterrence?
2. What is NATO and Warsaw pact
3. What was marshal plan?
4. Why superpower needed smaller states?
5. Explain relevance of NAM in post cold war period.
6. Mention the objectives of NAM.
7. What was NIEO? What were the main Demands of LDC's through NIEO?
8. How NAM served India's interest directly?
9. What were the factors which gave rise to cold war?
10. Write any four characteristic of Soviet System.
11. Discuss the Causes of disintegration of USSR.
12. Discuss the Consequences of disintegration of USSR.
13. Discuss the role of Gorbachev in the disintegration of USSR.
14. What is meant by Shock therapy? Discuss its consequences of shock therapy.
15. Discuss India's relationship with USSR
16. Discuss India's relationship with USA
17. Discuss India's relationship with china
18. Write any four factors which make European Union a powerful organization.
19. What is meant by ASEAN? Discuss ASEAN three communities.
20. Write any four objectives of ASEAN
21. Discuss various factors responsible for the rise of Chinese economy.
22. What is meant by Open door policy, ASEAN way, Vision 2020?
23. Rajiv Gandhi visit to china in 1988 was a turning point in India china relationship. Explain
24. What is meant by NEW WORLD ORDER?
25. How can hegemony be overcome?
26. Discuss various operation desert storm, Iraqi freedom, enduring freedom and operation infinite reach.
27. Discuss hegemony as hard power, soft power and structural power.
28. What is meant by opposition in a democratic system? Describe any two activities of the opposition during the first two Parliaments of 1952 and 1957.
29. Bharatiya Jana Sangh laid emphasis on which two main ideas?
30. How was the Planning Commission of India set up ? Mention its scope of work?
31. What was the States Reorganization Commission? When was it constituted? What was the most important recommendation of this Commission?
32. Explain any four reasons for the dominance of the Congress Party in the first three General Elections.
33. Explain any three consequences of partition of British India in 1947.
34. Explain the process and basis of the reorganization of States of India Union.
35. Explain the role played by Sardar Vallabhbhai Patel in the unification of the princely states in India.
36. What is meant by Planned Development?
37. What change was brought in the ballot paper after the first two General Elections in India?
38. What assurance did the Maharaja of Manipur want before signing the Instrument of Accession? What pressurized the Maharaja to hold elections in June, 1948 ?
39. Write any four factors which make European Union a powerful organization.
40. What is meant by ASEAN? Discuss ASEAN three communities.
41. Write any four objectives of ASEAN

42. Discuss various factors responsible for the rise of Chinese economy.
43. What is meant by Open door policy, ASEAN way, Vision 2020?
44. Rajiv Gandhi visit to china in 1988 was a turning point in India china relationship. Explain
45. Examine different areas of conflicts between India and Pakistan.
46. Discuss various reasons for unstable democracy in Pakistan.
47. Examine the areas of conflicts between India and Bangladesh.

GEOGRAPHY

Q1. Name any three important topics studied in Human geography.
Q2. How does the study of Human Geography help us to grow as good citizens?
Q3. What is meant by demographic cycle? From the point of view of demographic transition divide the world into different categories and explain.
Q4. Define distribution of population in India.
Q5. What is density of population how it is calculated?
Q6. What is subsistence agriculture? Name and explain its different forms.
Q7. What is mining write the factors affecting the mining activities?
Q8. Distinguish between Nomadic Herding and Commercial Livestock Rearing.
Q9. Collect information on the streams of migration. Explain with examples.
Q11. What does higher urban population or higher rural population of a country indicate?
Q12. Explain the significance of Plantation Agriculture in India.
Q13. Describe four different types of economic activities.
Q14. Distinguish between Mixed and Dairy Farming.
Q15. How is development index calculated ?
Q16. Make a list to show growth without development and growth with development.
Q17. List important mega cities of India.
Q18. Define urban agglomeration.
Q19. Write a note on the functional classification of towns.

Collect paper cuttings on the following topics:

i. Spatial variation in migration in India.
ii. Poverty scenario in India.
iii. Western or euro-centric view of development in India .
iv. Development in health care in India .
v. Indicators of Healthy life.
vi. Sexual division of labour.
vii. Development in literacy in India.
viii. Election results of 2019, and government formation.

HISTORY

1. Do atleast twenty very short type or objective type questions from each chapter so far done in class.
2. Prepare a map booklet and practice all the maps given in your textbook from each chapter done in class.
3. Do all the questions related to the ' Sources' and extra questions given in your text book.
4. Learn and revise all the chapters so far done in class.

BIOLOGY

1. Name the process in which unwanted mRNA regions are removed & wanted regions are joined.
2. Give the initiation codon for protein synthesis. Name the amino acid it codes for?
3. In which direction, the new strand of DNA synthesised during DNA replication.
4. Name the enzyme that joins the short pieces in the lagging strand during synthesis of DNA?
5. Mention the dual functions of AUG?

6. "DNA polymerase plays a dual function during DNA replication" comment on statement?
7. Three codons on mRNA are not recognised by tRNA what are they? What is the general term used for them what is their significance in protein synthesis?
8. Give two reasons why both the strands of DNA are not copied during DNA transcription?
9. What is transformation? Describe Grifith's experiment to show transformation? What did he prove from his experiment?
10. The base sequence on one strand of DNA is ATGTCTATA
    i) Give the base sequence of its complementary strand.
    ii) If an RNA strand is transcribed from this strand what would be the base sequence of RNA?
    iii) What holds these base pairs together?
11. What is an operon? Describe the major steps involved in an operon?
12. What do you mean semi conservative nature of DNA replication? Who proved it & how?
13. What do you mean by "Central Dogma of Molecular genetics?"
14. Describe the continuous & discontinuous Synthesis of DNA?
15. Where do transcription & translation takes place in a prokaryotic cell? Describe the three steps involved in translation?
16. What are the three types of RNA & Mention their role in protein Synthesis? [
17. How did Hershey and Chase differentiate between DNA and protein in their experiment while proving that DNA is the genetic material?
18. What are the functions of (i) methylated guanasine cap, (ii) poly-A "tail" in a mature on RNA?
19. Define a cistron. Giving examples differentiate between monocistronic and polyeistronic transcription unit

20. Name the phenomena that occur when homologous chromosomes do not separate during meiosis.
21. Name one trait each in humans & in drosophila whose genes are located on sex chromosome.
22. What is a test cross?
23. Give any two similarities between behavior of genes (Mendel's factor) during inheritance & chromosomes during cell division.
24. Which law of Mendel is universally accepted? State the law?
25. How will you find out whether a given plant is homozygous or heterozygous?
26. In Antirrhinum majus a plant with red flowers was crossed with a plant with white flowers. Work out all the possible genotypes & phenotypes of F1 & F2 generations comment on the pattern of inheritance in this case?
27. A red eyed male fruitfly is crossed with white eyed female fruitfly. Work out the possible genotype & phenotype of F1 & F2 generation. Comment on the pattern of inheritance in this cross?
28. In dogs, barking trait is dominant over silent trait & erect ears are dominant over drooping ears. What is the expected phenotypic ratio of offspring when dogs heterozygous for both the traits are crossed?
29. Why do sons of haemophilic father never suffer from this trait?
30. The map distance in certain organism between genes A & B is 4 units, between B & C is units, & between C & D is 8 units which one of these gene paves will show more recombination frequency? Give reason.
31. A man with AB blood group marries a woman with O group blood.
    i) Work out all the possible phenotypes & genotypes of the progeny.
    ii) Discuss the kind of domination in parents & progeny in this case?
32. In an cross made between a hybrid tall & red plant (TtRr) with dwarf & white flower (ttrr). What will be the genotype of plants in F1 generation?
33. Differentiate between dominance, co-dominance & Incomplete dominance with one example each.
34. Mention two differences between Turner.s syndrome and Klinefelter.ssyndome.
35. Mention four reasons why *Drosophila* was chosen by Morgan for his experiments in genetics.
36. A dihybrid heterozygous round, yellow seeded garden pea *(Pisumsativum)* was crossed with a double recessive plant.
    i) What type of cross is this?
    ii) Work out the genotype and phenotype of the progeny.
    iii) What principle of Mendel is illustrated through the result of this cross?
37. Explain the Law of Dominance using a monohybrid cross
38. What is pedigree analysis? Suggest how such an analysis, can be useful.
39. How is sex determined in human beings?

40. What is Down's syndrome? Give its symptoms and cause. Why is it that the chances of having a child with Down's syndrome increases if the age of the mother exceeds forty years?
41. Define aneuploidy. How is it different from polyploidy? Describe the individuals having following chromosomal abnormalities.
    i) Trisomy of 21st Chromosome
    ii) XXY
    iii) XO
42. Offsprings produced by asexual reproduction are referred to as clones.Why?
43. Name the most invasive aquatic plant weed which is called as .Terror of Bengal..
44. Mention the main difference between the offspring produced by asexual reproduction and progeny produced by sexual reproduction.
45. Which characteristic property of Bryophyllum is exploited by gardeners and farmers?
46. Higher organisms have resorted to sexual reproduction inspite of its complexity. Why?
47. Tapeworms posses both male and female reproductive organs. What is the name given to such organism? Give two more examples of such organisms.
48. Bryophytes and Pteridophytes produce a large number of male gametesbut relatively very few female gametes. Why?
49. . The probability of fruit set in a self-pollinated bisexual flower of a plant is far greater than a dioecious plant. Explain
50. Between an annual and a perennial plant, which one has a shorter juvenile phase? Give one reason.
51. Although potato tuber is an underground part, it is considered as a stem. Give two reasons.
52. In haploid organisms that undergo sexual reproduction, name the stage in the life cycle when meiosis occurs. Give reasons for your answer.
53. 'Fertilisation is not an obligatory event for fruit production in certains plants'. Explain the statement
54. In a developing embryo, analyse the consequences if cell divisions are not followed by cell differentiation.
55. Suggest a possible explanation why the seeds in a pea pod are arranged in a row, whereas those in tomato are scattered in the juicy pulp.
56. Differentiate between (a) oestrus and menstrual cycles; (b) ovipary and vivipary. Cite an example for each type.
57. What is vegetative propagation? Give two suitable examples
58. Define
    i) Juvenile phase,
    ii) Reproductive phase,
    iii) Senescent phase
59. What do you understand by double fertilization?
60. What is sporopollenin?
61. Name one plant each where pollination occurs with the help of
    i. Water.
    ii. Bats
62. Why do most zygotes develop after certain amount of embryo is formed?
63. What is polyembryony?
64. Why is emasculation done in the process of hybridization
65. Why pollen grains can remain well preserved as fossils?
66. Why are cleistogamous flowers invariably autogamous?
67. State any one advantage and disadvantage of pollen grains to humans
68. Differentiate between microsporogenesis and megasporogenesis.
69. Explain the stages involved in the maturation of a microspore into a pollen grain.
70. Explain the structure of an anatropous ovule with a neat labeled diagram?
71. Continued self pollination lead to inbreeding depression. List three devices,which flowering plant have developed to discourage self pollination?
72. What will be the fate of following structures in the angiospermicplant?Ovary wall, Ovule, zygote, outer integument, Inner integument and primary endosperm nucleus.
73. State the characteristics of insect pollinated flowers.
74. Differentiate between chasmogamous and cleistogamous flowers
75. Which type of pollination ensures the arrival of genetically different pollen grains to stigma?
76. What relationship exists between a species of moth and Yucca plant?
77. Enlist the advantages offered by seeds to angiosperms.
78. Explain the development of embryo in a dicotyledonous plant with neatly labeled diagrams.

79. What is self-incompatibility? Why does self-pollination not lead to seed formation in self-incompatible species?
80. What is triple fusion? Where and how does it take place? Name the nuclei involved in triple fusion
81. With a neat diagram explain the 7-celled, 8-nucleate nature of the female gametophyte
82. Draw the diagram of a microsporangium and label its wall layers. Write briefly on the role of the endothecium.

83. Name any two vestigial organs found in human body?
84. What is the cause of speciation according to Hugo De Vries?
85. Name the phenomenon by which rapid speciation takes place?
86. Name the common ancestor of apes & man?
87. Which period is known as "Age of amphibians"?
88. What is founder effect?
89. What provided energy for a biotic synthesis on primitive earth?
90. Define homologous organs? Give one example of organ homologous to hand of man?
91. What is the role of variation in evolution?
92. Describe one evidence which decisively proves that birds have evolved from reptiles?
93. By taking industrial melanism as on example, explain the concept of natural selection by evolution?
94. Who were the two scientists that conducted an experiment to synthesise organic molecule abiotically?
95. How did they provide the probable condition of the primitive earth in this experiment?
96. What does Oparin – haldane hypothesis about origin of life suggests?
97. What is Biogenetic law? How does comparative embryology provides evidences for evolution?
98. What does Hardy weinberg's principle states? What are the factors which affects Hardy weinberg's equilibrium?
99. What is speciation? List any two events that lead to speciation?
100. Define natural selection? Who else along with Charles Darwin proposed it as the mechanism of evolution?
101. Differentiate between convergent & divergent evolution?
102. What is Biogeography? How Darwin's finches provide biogeographical evidence in favour of evolution.
103. What is adaptive radiation? Explain with an example.
104. Stanley Miller and Harold Urey performed an experiment by recreating inthe laboratory the probable conditions Of the atmosphere of the primitiveearth.
    i) What was the aim of the experiment?
    ii) In what forms was the energy supplied for chemical reactions to occur?
    iii) For how long was the experiment run continuously? Name two products formed.

105. You all are required to register yourself with VIRTUAL SCIENCE PORTAL (www.scienceindia.com) and signup for uploading science articles/ blog. The unique school registeration code is ARMY889.
Username / Emailid – apsjc2012@gmail.com ; password – apsjc12345.
Incase you don't have assess to internet, submit the hard copy of the same to your science teacher.

106. Our school has launched a recycling program ' Behtar India Program'. You can contribute to this drill by collecting old newspaper, books and notebooks ; make bundle of the material collected by you. Write your name with class details on the cover page of the bundle.

107. You all will bring one innovative idea for the societal needs through science and technology and submit it separately to your science teacher.

ACCOUNTANCY

Q1: State the conditions under which capital balances may change under the system of a Fixed Capital Account.

Q2: Define Goodwill or give one Definition of Goodwill.
Q3: Why 'Goodwill' considered an 'Intangible Asset' but not a 'Fictitious Asset'?
Q4: How does the factor 'Location' affect the goodwill of a firm?
Q5: How does the factor 'Quality of Products' affect the goodwill of a firm?
Q6: How does the factor 'Efficiency of Management' affect the goodwill of a firm?
Q7: What is meant by Super Profit?
Q8: Give two main steps involved in valuing the Goodwill by according to Super Profit Method.
Q9: Give the formula for calculation of Goodwill by Capitalization of Average Profits.
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Q11: State any two circumstances when there is need to revalue the goodwill.
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Q13: Explain any 2 Features or characteristics of Goodwill.
Q14: Explain any four factors affecting the Goodwill.
Q15: What is the need for the valuation of Goodwill in case of partnership?
Q16: Define purchased Goodwill and Self Generated Goodwill.
Q17: What are the methods of Valuation of Goodwill?
Q18: Distinguish Between Average Profit Method and Super Profit Method.

Q19: A is partner in a firm. His capital as on Jan 01, 2010 was Rs. 60,000. He introduced additional capital of Rs. 20000 on Oct 01 2010. Calculate interest on A's capital @ 9% p.a.

Q20: Alka, Barkha and Charu are partners in a firm having no partnership agreement. Alka, Barkha and Charu contributed Rs. 20,000, Rs. 30,000 and Rs. 1,00,000 respectively. Alka and Barkha desire that the profit should be divided in the ratio of capital contribution. Charu does not agree to this. How will you settle the dispute?

Q21: A and B are partners in a firm without a partnership deed. A is an active partner and claims a salary of Rs. 18,000 per month. State with reason whether the claim is valid or not.

Q22: Chandar and Suman are partners in a firm without a partnership deed. Chandar's capital is Rs. 10,000 and Suman's capital is Rs. 14,000. Chander has advanced a loan of Rs. 5000 and claim interest @ 12% p.a. State whether his claim is valid or not.

Q23: R, S, and T entered into a partnership of manufacturing and distributing educational CD's on April 01, 2011. R looked after the business development, S content development and T financed the project. At the end of the year (31-03-2012) T wanted an interest of 12% on the capital employed by him. The other partners were not inclined to this. How would you resolve this within the ambit of the Indian Partnership Act, 1932?

Q24: A, B and C are partners in a firm. A withdrew Rs. 1000 in the beginning of each month of the year. Calculate interest on A's drawing @ 6% p.a.

Q25: A, B and C are partners in a firm; B withdrew Rs. 800 at the end of each month of the year. Calculate interest on B's drawings @ 6% p.a.

Q26: A, B and C are partners in a firm. They have omitted interest on capital @ 10 % p.a. for three years ended 31st march 2007. Their fixed capitals on which interest was to be calculated through –out were

A	Rs. 1,00,000
B	Rs. 80,000
C	Rs. 70,000

Give the necessary Journal entry with working notes.

Q27: X, Y, and Z are partners sharing profits and losses in the ratio of 3:2:1. After the final accounts have been prepared it was discovered that interest on drawings @ 5 % had not been taken into consideration. The drawings of the partner were X Rs. 15000, Y Rs. 12,600, Z Rs. 12,000. Give the necessary adjusting Journal entry.

Q28: A, B and C are partners sharing profits and losses in the ratio of 3:2:1. Their fixed capitals are Rs. 1,50,000, Rs. 1,00,000 and Rs. 80,000 respectively. Profit for the year after providing interest on capital was Rs. 60,000, which was wrongly transferred to partners equally. After distribution of profit it was found that interest on capital provided to them @ 10% instead of 12%. Pass necessary adjustment entry.Show your working clearly.

Q29: Ravi and Mohan were partner in a firm sharing profits in the ratio of 7:5. Their respective fixed capitals were Ravi Rs. 10,00,000 and Mohan Rs. 7,00,000. The partnership deed provided for the following:-

(i) Interest on capital @ 12% p.a.

(ii) Ravi's salary Rs. 6000 per month and Mohan's salary Rs. 60000 per year.

The profit for the year ended 31-03-2007 was Rs. 5,04,000 which was distributed equally without providing for the above. Pass an adjustment Entry.

Q30: Distinguish between fixed capital method and fluctuating capital method.

Q31: A, B and C were partners in a firm having capitals of Rs. 60,000, Rs. 60,000 and Rs. 80,000 respectively. Their current account balances were A- Rs. 10,000, B- Rs. 5000 and C- Rs. 2000 (Dr.). According to the partnership deed the partners were entitled to an interest on capital @ 5% p.a. C being the working partner was also entitled to a salary of Rs. 6,000 p. a. The profits were to be divided as follows:

(i) The first Rs. 20,000 in proportion to their capitals.

(ii) Next Rs. 30,000 in the ratio of 5:3:2.

(iii) Remaining profits to be shared equally.

During the year the firm made a profit of Rs. 1,56,000 before charging any of the above items.Prepare the profit and loss appropriate on A/C.

Q32: A and B are partners sharing profits in proportion of 3:2 with capitals of Rs. 40,000 and Rs. 30,000 respectively. Interest on capital is agreed at 5 % p.a. B is to be allowed an annual salary of Rs. 3000 which has not been withdrawn. During 2001 the profits for the year priorto calculation of interest on capital but after charging B's salary amounted to Rs. 12,000. A provision of 5% of this amount is to be made in respect of commission to the manager. Prepare profit and loss appropriation account showing the allocation of profits.

Q33: X and Y are partners sharing profits and losses in the ratio of 3: 2 with capitals of Rs. 50,000 and Rs. 30,000 respectively. Each partner is entitled to 6% interest on his capital. X is entitled to a salary of Rs. 800 per month together with a commission of 10% of net 'Profit remaining after deducting interest on capitals and salary but before charging any commission. Y is entitled to a salary of Rs. 600 per .month together I. with-a commission of 10% of Net profit remaining after deducting interest on capitals and salary and after charging all commissions. The profits for the year prior to calculation of interest on capital but after charging salary of partners amounted to Rs. 40,000. Prepare partners' Capital Accounts:-
(i) When capitals are fixed, and
(ii) When capitals are. fluctuating.

Q34: Ram and Sham were partners in a firm. The partnership agreement provides that:
(i) Profit sharing ratio will be "3: 2.
(ii) Ram will be allowed a salary of Rs. 500 p.m.
(iii) Sham who manages the sales department will be allowed a commission equal to 10% of the net profit after allowing Ram's salary. '
(iv) 8% interest will be allowed on partners' fixed capitals.
(v) 6% interest will be charged on partners' annual drawings.

(vi) The fixed capitals of Rain and Sham were Rs. 2,00,000 and Rs. 1,50,000 respectively. Their annual drawings were Rs. 18,000 and Rs. 15,000 respectively. The net profit for the year ended nearly amounted to Rs. 60,000. Prepare firms Profit and Loss Appropriation Account.

Q35: P and Q are partners with capitals of Rs. 6,00,000 and Rs. 4,00,000 respectively. The profit and Loss Account of the firm showed a net Profit of Rs. 4, 26,800 for the
year. Prepare Profit and Loss account after taking the following into consideration:-
(i) Interest on P's Loan of Rs. 2,00,000 to the firm
(ii) Interest on 'capital to be allowed @ 6% p.a.
(iii) Interest on Drawings @ 8% p.a. Drawings were; P Rs 80,000 and Q Rs. 1000,000.
(iv) Q is to be allowed a commission on sales @ 3%. Sales for the year was Rs. 1000000
(v) 10% of the divisible profits are to be kept in a Reserve Account.

Q36: A, and C are partners with fixed capitals of Rs. 2,00,000, Rs. 1,50,000 and Rs. 1,00,000 respectively. The balances of current accounts on 1st January, 2004 were A Rs. 10,000 (Cr.); B Rs. 4,000 (Cr.) and C Rs. 3,000 (Dr.). A gave a loan to the firm of Rs. 25,000 on 1st July, 2004. The Partnership deed provided for the following:-
(i) Interest on Capital at 6%.
(ii) Interest on drawings at 9%. Each partner drew Rs. 12,000 on 1st July, 2004.
(iii) Rs. 25,000 is to be transferred in a Reserve Account.
(iv) Profit sharing ratio is 5:3: 2 up to Rs. 80,000 and above Rs. 80,000 equally. Net Profit of the firm before above adjustments was Rs.1,98,360.
From the above information prepare Profit and Loss Appropriation Account,
Capital and Current Accounts of the partners.

Q37: From the following balance sheet of X and Y, calculate interest on capitals @ 10% p.a. payable to X and Y for the year ended 31st December, 2008.

Liabilities	Amount	Assets	Amount
X's Capital	50,000	Sundry Assets	1,00,000
Y's capital	40,000	Drawings X	10,000
P & L appropriation A/c (2008)	20,000		
	1,10,000		1,10,000

During the year 2008, X's drawings were Rs. 10,000 and Y's Drawing were Rs 3,000. Profit during the year, 2008 was Rs:'30,000.

Q38: Yogesh, Ajay and Atul are partners sharing profits in the ratio 4:3:2. Yogesh withdraws Rs.3,000 in the beginning of every month. Ajay withdraws Rs. 2,000 in the middle of every month whereas Atul withdraws Rs. 1,500 at the end of every month. Interest on capitals and drawings is to be calculated @ 12% p.a. Ajay is also to be allowed a salary of Rs. 1,000 per month. After deducting salary but before charging any type of interest, the profit for the year ending 31stpecember, 1997 was Rs.,1,14,780. Prepare Profit & Loss Appropriation Account, Partners' Capital Accounts and Current Accounts
from the additional information.

Q39: P and Q are partners from 1st January, 1998 without any partnership agreement and they introduced capital of Rs. 40,000 and Rs. 20,000 respectively. On 1st July, 1998, P advances Rs. 10,000 by way of loan to the firm without any agreement as to interest. The Profit & Loss Account for the year 1998 disclosed a profit of Rs.14,250; but the partners cannot agree upon the question of interest and upon the basis of division of profits. You are required to divide the profit between them giving reasons for your method.

Q40: X and Y are partners. X's capital is Rs. 10,000 and Y's capital is Rs. 6.000. Interest is payable @ 6%, p.a:.Y is entitled to a salary of Rs. 300 per month. Profit for the current year before charging any Interest and Salary to Y is Rs. 8,000 Divide the profit between X & Y.'

Q41: A and B are partners' sharing profits in-proportion of 3 : 2 With Capitals of Rs. 40,000 and Rs. 30,000 respectively': Interest On Capital is agreed at 5% p; a.. B is to be " allowed an annual salary of Rs. 3,000 which has not been Withdrawn. During 2007, the profit for the year prior to calculation of Interest on Capital. But after charging B's salary amounted to Rs. 12,000. A provision of 5% of this amount is to be made in respect of commission to the manager. Prepare an account showing the allocation of profits

GOODWILL

Q1: Define Goodwill or give one Definition of Goodwill.

Q2: Why 'Goodwill' considered an 'Intangible Asset' but not a 'Fictitious Asset'?

Q3: How does the factor 'Location' affect the goodwill of a firm?

Q4: How does the factor 'Quality of Products' affect the goodwill of a firm?

Q5: How does the factor 'Efficiency of Management' affect the goodwill of a firm?

Q6: What is meant by Super Profit?

Q7: Give two main steps involved in valuing the Goodwill by according to Super Profit Method.

Q8: Give the formula for calculation of Goodwill by Capitalization of Average Profits.
Q9: Give the formula for calculation of Goodwill by Capitalization of Super Profits.
Q10: State any two circumstances when there is need to revalue the goodwill.[CBSE 1997]
Q11: How do we record goodwill in the books of Accounts as per the Accounting Standards?
Q12: Explain any 2 Features or characteristics of Goodwill.
Q14: What is the need for the valuation of Goodwill in case of partnership?
Q15: Define purchased Goodwill and Self Generated Goodwill.
Q16: What are the methods of Valuation of Goodwill?
Q17: Distinguish Between Average Profit Method and Super Profit Method

RECONSTITUTION OF PARTNERSHIP

Q1: What do you mean by Reconstitution of Partnership?
Q2: State any two occasions on which reconstitution of partnership firm can take place.
Q3: How is a new partner admitted?
Q4: What are the two main financial rights of a new partner?
Q5: What is the nature of Revaluation Account?
Q6: Give two Circumstances in which sacrificing ratio may be applied
Q7: Can a partner be exempted from sharing the losses in a firm? If yes, under what Circumstances?
Q8: State the meaning of Sacrificing Ratio.
Q9: What is the nature of Revaluation Account?
Q10: Why is it necessary to revalue the assets and liabilities of a firm on its reconstitution?
Q11: Why are Reserves and Surplus and Accumulated Profits & Losses are distributed at the time of reconstitution of firm?
Q12: Why goodwill is adjusted at the time of admission of a partner?
Q13: Why a new partner is admitted to the firm?
Q14: Pawan and Jayshree are partners. Bindu is admitted for $1/4^{th}$ share. What is ratio in which Pawan and Jayshree will sacrifice their share of profit in favour of Bindu?
Q15: In the partnership deed, how are mutual relations of partners governed**?**
Q16: A and B are partners in a firm without a partnership deed. A is an active partner and claims a salary of Rs.18,000 per month. State with reasons whether the claim is valid or not.
Q17: State any two reasons for the preparation of Revaluation Account at the time of admission of a new partner.
Q18: State the other right which a newly admitted partner acquires beside the right to share profits of the firm
Q19: What is Revaluation Account? How it is differ from Profit & Loss Appropriation A/c?
Q20: Why is it necessary to adjust goodwill at the time of change in profit sharing ratio?
Q21: Give the Formula for calculating 'Gaining Share' of a partner in a partnership firm.
Q22: Give two circumstances in which sacrificing ratio may be applied.

RECONSTITUTION OF PARTNERSHIP

(CHANGE IN PROFIT SHARING RATIO AMONG THE EXISTING PARTNERS,

ADMISSION OF A PARTNER, RETIREMENT/DEATH OF A PARTNER)

Ql: At the time of change in profit sharing ratio among the existing partners, where will you record an unrecorded liability?

Q2: Anand, Bhutan and Chadha are partners sharing profits in ratio of 3:2:1. On 1st April 2007, they decided to share profits equally.Name the partners who is gaining on consequence of such change.

Q3: Give two characteristics of goodwill.

Q4: Name any two factors affecting goodwill of a partnership firm.

Q5: In a partnership firm assets are Rs.5, 00,000 and liabilities are Rs. 2, 00,000. The normal profit rate is 15%. State the amount of normal profits.

Q6: State the amount of goodwill, if goodwill is to be valued on the basis of 2 years‘ purchase of last year‘s profit. Profit of the last year was Rs.20, 000.

Q7: Where will you record ‗increase in machinery' in case of change in profit sharing ratio among the existing partners?

Q8: Name two methods for valuation of goodwill in case of partnership firm.

Q9: Give formula for calculating goodwill under ‗super profit method'.

Q10: Pass the journal entry for increase in the value of assets or decrease in the value of liabilities in the Revaluation A/c?

Q11: P,Q and R are partners in a firm sharing profits in the ratio of 2:2:1 on 1.4.2007 the partners decided to share future profits in the ratio of 3:2:1 on that day balance sheet of the firm shows General Reserve of Rs 50,000. Pass entry for distribution of reserve.

Q12: The gaining partner's should compensate to sacrificing partner's with the amount of gain. Journalise this statement.

Q13: What are the two main rights acquired by the incoming new partner in a partnership firm? ,

Q14: A and B are partners, sharing profits in the ratio of 3:2. C admits for 1/5 share . State the sacrificing ratio.

Q15: How should the goodwill of the firm be distributed when the sacrificing ratio of any of the existing partner is negative (i.e. he is gaining)

Ql6: In case of admission of a partner, in which ratio profits or loss on revaluation of assets and reassessment of liabilities shall be divided?

Q17: Give journal entry for distribution of ‗Accumulated Profits* in case of admission of a partner.

Q18: At the time of admission of partner where will you record ‗unrecorded investment'?

Q19: The goodwill of a partnership is valued at Rs.20,000. State the amount required by a new partner, if he is coming for 1/5 share in profits.

Q20: What journal entries should be passed when the new partner brings his share of goodwill in kind?

Q21: What journal entries will be passed when the new partner is unable to bring his share of goodwill in cash?

Q22: In case of admission of a new partner, goodwill was already appearing in the books of the firm. Give journal entry for its treatment

Q23: At the time of admission of a new partner, workmen's compensation reserve in appearing in the Balance sheet as Rs 1,000. Give journal entry if workmen's compensation at the time of admission is estimated at Rs 1,200.

Q24: Give journal entry for recording deceased partner's share in profit from the closure of last balance sheet till the date of his death.

Q25: Define gaining ratio.

Q26: Give two circumstances in which gaining ratio can be applied.

Q27: At the time of retirement of a partner give journal entry for writing off the existing goodwill.

1 Mark Questions

Admission of a Partner

Q1: State the two financial rights acquired by a new Partner?

Q2: Give the name of the compensation which is paid by a new Partner to sacrificing Partners for sacrificing their share of profits.

Q3: Enumeration the matters that need adjustment at the time of admission of a new Partner.

Q4: Give two circumstances in which sacrificing Ratio may be applied.

Q5: Why is it necessary to revalue assets and reassess liabilities of a firm in case of admission of a new partner?

Q6: What are the accumulated profit and accumulated losses?

Q7: Explain the treatment of goodwill in the books of a firm on the admission of a new Partner when goodwill already appears in the Balance sheet at its full value and the new partner brings his share of good will in cash.

Q8: Under what circumstances the premium for goodwill paid by the incoming Partner will not recorded in the books of Accounts ?

Q9: A and B share profits and losses in the Ratio of 4:3, they admit C with 3/7th share; which he gets 2/7th from A and 1/7 from B. What is the new profit sharing ratio?

Q10: The capital of A and B are Rs. 50,000 and Rs. 40,000. To Increase the Capital base of the firm to Rs. 1, 50,000, they admit C to join the firm; C is required to Pay a sum of Rs. 70,000, what is the amount of premium of goodwill?

Q11: Distinguish between New Profit - sharing ratio and sacrificing ratio?

2-3 marks questions:

Q 1: A & B are partners sharing in the ratio of 3:2. C is admitted. C gets 3/20th from A and 1/20th from B. calculate new and sacrifice ratio

Q2: X & Y are partners share profits in the ratio of 5:3. Z the new partner gets 1/5 of X's share and 1/3rd of Y's share. Calculate new ratio.

Q 3: P & Q are partners sharing in the ratio of 5:3. They admit R for 1/4th share and agree to share between them in the ratio of 2:1 in future. Calculate new ratio.

6-8 marks Questions

Q1: Dinesh, Yasmine and Faria are partners in a firm, sharing profits and losses in 11:7:2 respectively. The Balance Sheet of the firm as on 31st Dec 2001 was as follows:

Liabilities	Rs.	Assets	Rs.
Sundry Creditors	800	Factory	7,350
Public Deposits	1,190	Plant & Machinery	1,800
Reserve fund	900	Furniture	2,600
Capital A/c		Stock	1,450
Dinesh	5,100	Debtors Rs. 1,500	
Yasmine	3,000	Less: bad debts Rs. 300 provisions	1,200
Faria	5,000	Cash in hand	1,590
	15,900		15,900

On the same date, Annie is admitted as a partner for one-sixth share in the profits with Capital of Rs. 4,500 and necessary amount for his share of goodwill on the following terms:-

(i) Furniture of Rs. 2,400 was to be taken over by Dinesh, Yasmine and Faria equally.
(ii) A Liability of Rs. 1,670 is created against Bills discounted.
(iii) Goodwill of the firm is to be valued at 2.5 years' purchase of average profits of 2 years.
(iv) The profits are as under:
2000:- Rs. 2,000 and 2001 - Rs. 6,000.

(v) Drawings of Dinesh, Yasmine, and Faria were Rs. 2,750; Rs. 1,750; and Rs. 500 respectively.
(vi) Machinery and Public Deposits are revalued to Rs. 2,000 and Rs. 1,000 respectively.
Prepare Revaluation Account, Partners' Capital Accounts and Balance Sheet of the new firm.

Q2: X and Y are partners as they share profits in the proportion of 3:1 their balance sheet as at 31.03.07 as follows.

Liabilities	Rs.	Assets	Rs.
Capital Account		Land	1,65,000
X	1,76,000	Furniture	24,500
Y	1,45,200	Stock	1,32,000
Creditors	91,300	Debtors	35,200
		Bills Receivable	28,600
		Cash	27,500
	4,12,500		4,12,500

On the same date, Z is admitted into partnership for 1/5th share on the following terms

(i) Goodwill is to be valued at 3½ years purchase of average profits of last for year which was Rs. 20,000 Rs. 17,000 Rs. 9,000 (Loss) respectively.
(ii) Stock is fund to be overvalued by Rs. 2,000 Furniture is reduced and Land to be appreciated by 10% each, a provision for Bad Debts @ 12% is to be created on Debtors and a Provision of Discount of Creditors @ 4% is to be created.
(iii) A liability to the extent of Rs. 1,500 should be created for a claim against the firm for damages.
(iv) An item of Rs. 1,000 included in Creditors is not likely to be claimed, and hence it should be written off.
Prepare Revaluation Account, Partners: Capital Accounts and Balance Sheet of the new firm if Z is to contribute proportionate capital and goodwill. The capital of partners is to be in profit sharing ratio by opening current Accounts.

Q3: Rashmi and Pooja are partners in a firm. They share profits and losses in the ratio of 2:1. They admit Santosh into partnership firm on the condition that she will bring Rs. 30,000 for Goodwill and will bring such an amount that her capital will be 1/3 of the total capital of the new firm. Santosh will be given 1/3 share in future profits. At the time of admission of Santosh, the Balance Sheet of Rashmi and Pooja was as under:

Liabilities	Rs.	Assets	Rs.
Capital Account		Cash	90,000
Rashmi	1,35,000	Machinery	1,20,000
Pooja	1,25,000	Furniture	10,000
Creditors	30,000	Stock	50,000
Bills Payable	10,000	Debtors	30,000
	3,00,000		3,00,000

It was decided to:

a) revalue stock at Rs. 45,000.

b) depreciated furniture by 10% and machinery by 5%.

c) make provision of Rs. 3,000 on sundry debtors for doubtful debts.

Prepare Revaluation Account, Partners: Capital Accounts and Balance Sheet of the new firm.

Q.4 A, B and C are equal partners in a firm, their Balance Sheet as on 31st March 2002 was as follows:

Liabilities	Amount	Assets	Assets
Sundry Creditors	27,000	Goodwill	1,17,000
Employees Provident Fund	6,000	Building	1,25,000
Bills Payable	45,000	Machinery	72,000
General Reserve	18,000	Furniture	24,000
Capitals:		Stock	1,14,000
A	2,17,000	Bad Debts	1,02,000
B	1,66,000	Cash	12,000
C	90,000	Advertisement Suspense A/c	3,000
	5,69,000		5,69,000

On that date they agree to take D as equal partner on the following terms:

(i) D should bring in Rs. 1, 60,000 as his capital and goodwill. His share of goodwill is valued at Rs. 60,000.
(ii) Goodwill appearing in the books must be written off.
(iii) Provision for loss on stock and provision for doubtful debts is to be made at 10% and 5% respectively.
(iv) The value of building is to taken Rs. 2,00,000.
(v) The total capital of the new firm has been fixed has been fixed at Rs. 4,00,000 and the partners capital accounts are to be adjusted in the profit sharing ratio. Any excess is to be transferred to current account and any deficit is to be brought in cash.

Prepare Revaluation Account, Partners Capital Accounts, and the Balance Sheet of the new firm.

Q5: A, Band C were partners in a firm sharing profits equally: Their Balance Sheet on.31.12.2007 stood as:

BALANCE SHEET AS AT 31.12.07

Liabilities	**Rs.**	**Assets**	**Rs.**
Capital		Goodwill	18,000
A Rs. 30,000		Cash	38,000
B Rs. 30,000		Debtors 43,000	
C Rs. 25,000	85,000	Less: Bad Debt provision 3,000	40,000
Bills payable	20,000	Bills Receivable	25,000
Creditors	18,000	Land and Building	60,000

Workers Compensation Fund	8,000	Plant and Machinery	40,000
Employees provident Fund	60,000		
General Reserve	30,000		
	2,21,000		**2,21,000**

It was mutually agreed that C will retire from partnership and for this purpose following terms were agreed upon.

i) Goodwill to be valued on 3 years' purchase of average profit of last 4 years which were 2004 : Rs.50,000 (loss); 2005 : Rs. 21,000; 2006: Rs.52,000; 2007 :Rs.22,000.
ii) The Provision for Doubtful Debt was raised to Rs. 4,000.
iii) To appreciate Land by 15%.
iv) To decrease Plant and Machinery by 10%.
v) Create provision of Rs;600 on Creditors.
vi) A sum of Rs.5,000 of Bills Payable was not likely to be claimed.
vii) The continuing partners decided to show the firm's capital at 1,00,000 which would be in their new profit sharing ratio which is 2:3. Adjustments to be made in cash

Make necessary accounts and prepare the Balance Sheet of the new partners.

DEATH OF A PARTNER

SHORT QUESTIONS--- (3-4 MKS)

Q1: A, B and C are partners sharing profits and losses in the ratio of 5:4:1. The profit for the year ending 31, March, 2010 was Rs 1, 00,000. B died on 30th June 2010. Calculate C's share of profit till the date of death and pass necessary journal entry.

Q2: X, Y and Z are partners in a firm sharing profits and losses in the ratio of 5:4:1.The Partnership agreement provides that the share of profit of the deceased partner will be worked out on the basis of sales. The sales for the year 2009-10 was Rs 8,00,000 and the sales from April 1, 2010 to June 30, 2010 was Rs 1,50,000. The profit for the year ended 31st March 2010 amounted to Rs 1,00,000. Y died on 30th June 2010. Calculate his share of profit and pass necessary journal entry.

Q3: Ram, Mohan and Sohan were partners sharing profits and losses in the ratio of 5:3:2. On

31st March, 2006 their Balance Sheet was as under:

Liabilities	Rs	Assets	Rs
Capitals		Leasehold	1,25,000
Ram	1,50,000	Patents	30,000
Mohan	1,25,000	Machinery	1,50,000
Sohan	75,000	Stock	1,90,000
Workmen's Compensation Reserve	30,000	Cash at Bank	40,000
Creditors	1,55,000		
	5,35,000		5,35,000

Sohan died on 1st August, 2006. It was agreed that :

(i) Goodwill of the firm is to be valued at Rs. 1,75,000.

(ii) Machinery be valued at Rs. 1,40,000; Patents at Rs. 40,000; Leasehold at Rs. 1,50,000 on this date.

(iii) For the purpose of calculating Sohan's share in the profits of 2006-07, the profits should be taken to have accrued on the same scale as in 2005-06, which were Rs. 75,000.

Prepare Sohan's Capital Account and Revaluation Account.

Q4: Following is the Balance sheet of P , Q and R as on 31st December 2010 sharing profits in the ratio of 5:3:2

Particulars	Rs	Particulars	Rs
Capital Accounts		Cash	13000
P	30000	Debtors	8000
Q	25000	Machinery	30000
R	15000	Stock	10000
Creditors	7000	Patents	6000
Reserve Fund	10000	Building	20000
	87000		87000

P died on 1st July 2011 on the following terms

(i) Patents are to be valued at Rs 8000, Machinery at Rs 28000 and Building at Rs 30,000.
(ii) Interest on Capital is to be provided at 10% p.a.
(iii) Goodwill of the firm is valued at 2 years purchase of the average profits of the last five years which were-
2006 - Rs 15,000 2007 – Rs 13000 2008 – Rs 12,000

2009—15,000 and 2010--- Rs 20,000

(iv) Profit for the year 2011 has been accrued on the same scale as in 2010.

(iv) P's Executor is to be paid Rs 11,500 and balance transferred to his loan account.
Prepare Revaluation Account, P's Capital account and P's executors account. Also pass necessary journal entries.

Q5: X, Y and Z are partners sharing profits and losses in the ratio of 2:2:1 respectively. Their Balance Sheet as on 31st march 2007 was as follows—

Balance Sheet as on 31st March 2010

Liabilities	Rs	Assets	Rs
Sundry Creditors	1,00,000	Cash at bank	20,000
Capital Accounts		Stock	30,000
X	60,000	Sundry Debtors	80,000
Y	1,00,000	Investments	70,000
Z	40,000	Furniture	35,000
General Reserve	50,000	Buildings	1,15,000
	3,50,000		3,50,000

Z died on 30th September 2007 and the following was provided—

a) —Z will be entitled to his share of profit upto the date of death based on last year's profit.

b) Z's share of Goodwill will be calculated on the basis of 3 years purchase of average profits of last four years . The profits of the last four years was as follows—

Year I – 80,000, Year II –Rs 50,000 Year III – Rs 40,000 and Year IV –Rs 30,000

c) Interest on Capital was provided at 12% p.a.

d) Drawings of the deceased partner upto the date of death was Rs 10,000.

e) Rs 15,400 should be paid immediately to the executor of the deceased partner and the balance in four equal yearly instalments with interest at 12% on remaining balance.

Prepare Z's capital account and Z's executors account till the account is finally closed

Q6: Anil, Jatin and Ramesh were sharing profit in the ratio of 2:1:1. Their Balance Sheet as at 31.12.2001 stood as follows:-

Liabilities		**Rs**	**Assets**		**Rs**
Creditors		24,400	Cash		1,00,000
Bank Loan		10,000	Debtors	20000	
Profit and Loss A/c		18,000	Less : Provision	1600	18,400
Bills Payable		2,000	Stock 10,000		10,000
Building		20,000	Investment		14,000
Anil's Capital	50,000		Goodwill		22,000
Jatin's Capital	40,000				
Ramesh's Capital	40,000	1,30,000			
		1,84,400			1,84,400

Ramesh died on 31st March 2002. The following adjustments were agreed upon-

(a) Building be appreciated by Rs. 2,000

(b) Investments be valued at 10% less than the book value.

(c) All debtors (except 20% which are considered as doubtful) were good.

(d) Stock be increased by 10 %

(e) Goodwill be valued at 2 years' purchase of the average profit of the past five years.

(f) Ramesh's share of profit to the death be calculated on the basis of the profit of the preceding year. profit for the years 1997, 1998, 1999 and 2000 were Rs. 26,000, Rs. 22,000, Rs. 20,000 and Rs. 24,000 respectively.

Prepare revaluation account, partner's capital Account, Ramesh's Executors' Account and Balance sheet immediately after Ramesh's death assuming that Rs. 18, 425 be paid immediately to his executors and balance to b left to the Ramesh's Executor's Account

Good luck & Happy Holidays
Take care of your health and enjoy holiday.