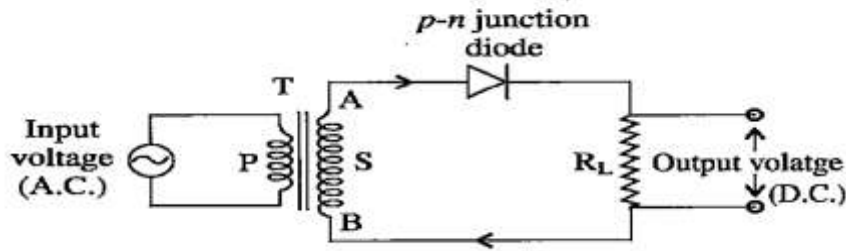
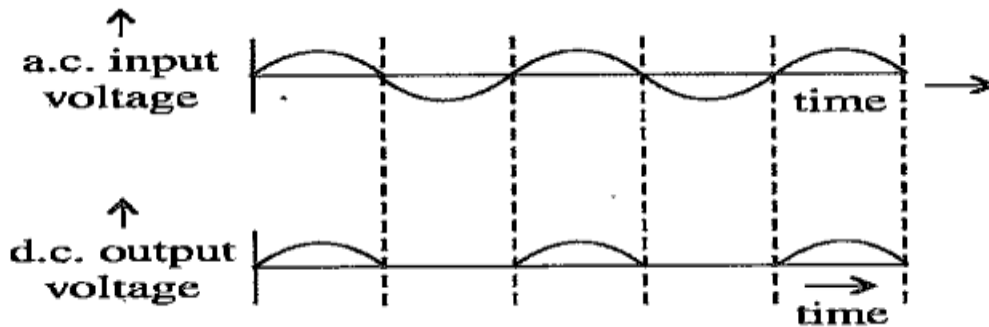


(ii) Half wave rectifier :



**Working :** When an input ac voltage is applied across the primary coil, a potential difference is developed across the ends of the secondary coil. Consider that in half cycle of input ac signal, the end A acts as the +ve end and B acts as the -ve end of the battery. So, the diode is in forward bias and we get output across the ends of the load resistance  $R_L$ .

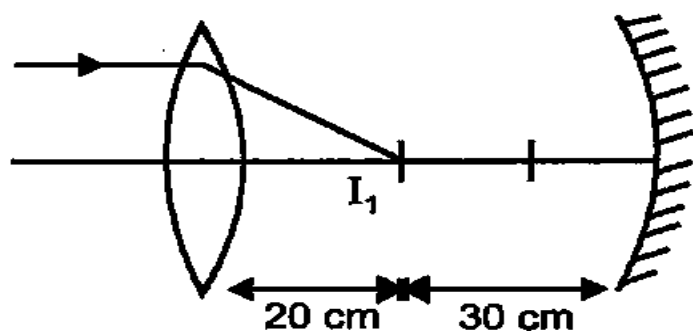
In the second half cycle, ends A and B reverse in polarity. Now, A acts as the -ve end and B acts as the +ve end. So, the diode D is in reverse bias and no output is obtained due to the high resistance offered by the diode.



So, in this process, we get output alternately, and hence the diode is called the half wave rectifier.

A convex lens of focal length 20 cm is placed coaxially with a concave mirror of focal length 10 cm at a distance of 50 cm apart from each other. A beam of light coming parallel to the principal axis is incident on the convex lens. Find the position of the final image formed by this combination. Draw the ray diagram

**Answer :** The beam incident on lens L is parallel to principal axis. Hence the lens forms an image  $I_1$  at its focus. *i.e.*, at a distance  $OI_1 (= 20 \text{ cm})$  from the lens.



The image  $I_1$  is formed in front of the mirror and hence, acts as a real source for the mirror. The concave mirror forms the image  $I_2$ , whose distance from the mirror can be calculated as;

$$\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$$

Here :  $u = -30$  cm, and  $f = -10$  cm

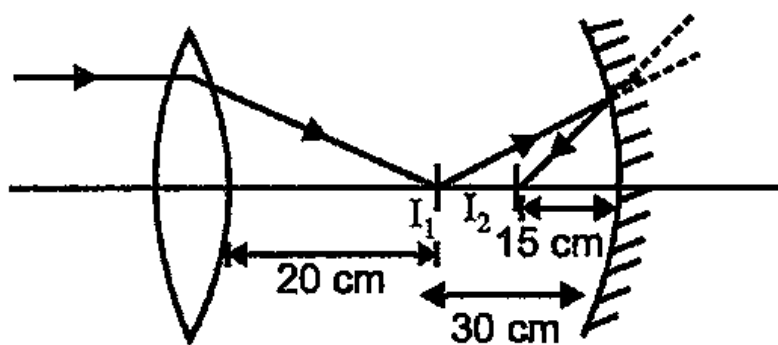
$$\Rightarrow \frac{1}{v} = \frac{1}{f} - \frac{1}{u}$$

$$\Rightarrow \frac{1}{v} = -\frac{1}{10} + \frac{1}{30}$$

$$\Rightarrow \frac{1}{v} = \frac{1-3}{30} = -\frac{2}{30}$$

$$\Rightarrow v = -15 \text{ cm}$$

Hence, the final image is formed at a distance of 15 cm from the concave mirror, as shown in the following figure.



19. (a) Using the phenomenon of polarization, show how transverse nature of light can be demonstrated.

(b) Two polaroids  $P_1$  and  $P_2$  are placed with their pass axes perpendicular to each other. Unpolarised light of intensity  $I_0$  is incident on  $P_1$ . A third polaroid  $P_3$  is kept in between  $P_1$  and  $P_2$  such that its pass axis makes an angle of  $30^\circ$  with that of  $P_1$ . Determine the intensity of light transmitted through  $P_1$ ,  $P_2$  and  $P_3$ . [3]

2

**Answer :** (a) Suppose that an ordinary light is incident normally on a pair of crystals  $C_1$  and  $C_2$ . When the incident ray of light passes through crystal  $C_1$ , it gets plane polarised in the direction perpendicular to the length of crystal. Now, we see that when the axis of two crystals are parallel, the intensity of the emerging light will be maximum. When the second crystal is placed perpendicular with respect to the first crystal, the intensity of light observed is zero. This is due to the electric field of the plane polarised light obtained from  $C_1$  can vibrate only in one direction. Hence, when the axis of the crystal  $C_2$  is perpendicular to its direction of vibration of electric field, it gets blocked. This shows the transverse nature of light.

(b) Intensity of light after falling on  $P_1$ ,

$$I = \frac{I_0}{2}$$

Intensity of light after falling on  $P_3$ ,

$$I' = I \cos^2(\theta) = \frac{I_0}{2} \cos^2(30^\circ) = \frac{3I_0}{8}$$

$$\left[ \because \cos 30^\circ = \frac{\sqrt{3}}{2} \right]$$

Therefore, a light of intensity  $\frac{3I_0}{8}$  will pass

through the  $P_2$ , and the angle between  $P_3$  and  $P_2$  will be  $60^\circ$  because of the condition given in the question. Intensity of light after falling on  $P_2$

$$I'' = I' \cos^2 60^\circ$$

$$I'' = \frac{3I_0}{8} \cos^2(60^\circ) = \frac{3I_0}{32} \left[ \because \cos 60^\circ = \frac{1}{2} \right]$$

20. (a) Calculate the distance of an object of height  $h$  from a concave mirror of radius of curvature 20 cm, so as to obtain a real image of magnification 2. Find the location of image also.

(b) Using mirror formula, explain why does a convex mirror always produce a virtual image. [3]

**Answer : (a)** Given, Height of object =  $h$

Radius of curvature =  $-20$  cm

Magnification,  $m = -2$

Object distance,  $u = ?$

Image distance,  $v = ?$

$$\text{Magnification, } M = \frac{-v}{u} = \frac{h_i}{h_o}$$

$$-2 = -\frac{v}{u}$$

$$v = 2u \quad \dots(i)$$

Using mirror formula,

$$\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$$

$$\frac{1}{2u} + \frac{1}{u} = \frac{-2}{20}$$

$$\frac{+3}{2u} = \frac{-2}{20}$$

$$u = -\frac{60}{4} = -15 \text{ cm}$$

Putting in (i), we get

$$v = 2 \times -15 \text{ cm} \\ = -30 \text{ cm}$$

$$\frac{h_i}{h_o} = \left| \frac{v}{u} \right|$$

$$\frac{h_i}{h} = \left| \frac{2u}{u} \right|$$

Height of image,  $h_i = 2h$  when object is placed at 15 cm from the mirror.

**(b)** For convex mirror,

$$f = +ve \text{ (always)}$$

Mirror formula,

$$\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$$

$$\frac{1}{v} = \frac{1}{f} + \frac{1}{u}$$

As,

$$u = -ve \text{ (for real object)}$$

$$\frac{1}{v} = \frac{1}{f} + \left( \frac{1}{-u} \right)$$

$$\frac{1}{v} = \frac{1}{f} - \frac{1}{u}$$

$$v = +ve$$

Hence, it will form virtual and erect image.

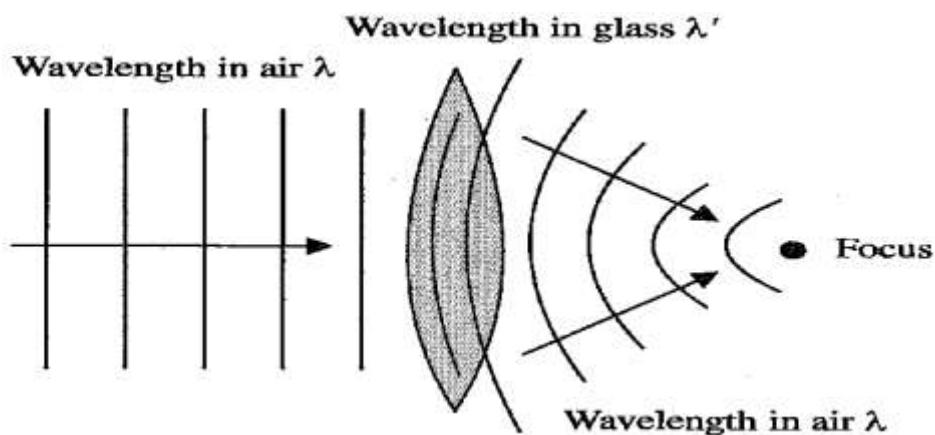
**21. Define the term wave front. State Huygen's principle.**

**Consider a plane wave front incident on a thin convex lens. Draw a proper diagram to show how the incident wave front traverses through the lens and after refraction focusses on the focal point of the lens, giving the shape of the emergent wave front. [3]**

**Answer : Wave front :** A wave front is the locus of all the points in space that reach a particular distance by a propagating wave in same phase at any instant.

**Huygen's principle :** It is based on two assumptions :

- (a) Each point of the wavefront behaves like a source of secondary disturbances and secondary wavelets from there points spread out in all directions with the same speed as that of the original wave front.
- (b) When we draw an envelope in the forward direction of the secondary disturbances at any instant, And this envelope tells the new position of the wavefront at that instant.

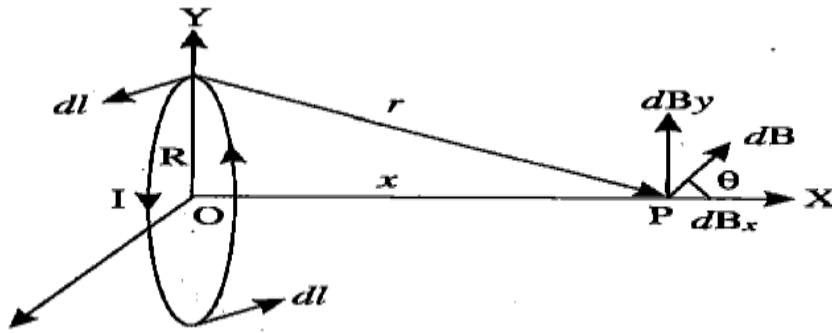




22. Use Biot-Savart law to derive the expression for the magnetic field on the axis of a current carrying circular loop of radius R.

Draw the magnetic field lines due to a circular wire carrying current I. [3]

**Answer :** Imagine a circular coil of radius R with centre O. Let the current flowing through the circular loop be I. Suppose P is any point on the axis at a distance of  $r$  from the centre O. Let the circular coil be made up of a large number of small elements of current, each having a length of  $dl$ .



$$dB = \frac{\mu_0 I}{4\pi} \times \frac{|dl \times r|}{r^3}$$

where,

$$r^2 = x^2 + R^2$$

$$|dl \times r| = r dl$$

[  $\because$  Both are perpendicular ]

Here,  $r$  is the position vector of point O from the current element.

So,

$$dB = \frac{\mu_0}{4\pi} \times \frac{I \cdot dl}{r^2}$$

$$dB = \frac{\mu_0}{4\pi} \times \frac{I \cdot dl}{(x^2 + R^2)}$$

$d\mathbf{B}$  has two components *i.e.*,  $d\mathbf{B}_x$  and  $d\mathbf{B}_y$ .  $d\mathbf{B}_y$  is cancelled out and only the  $x$ -component remains.

$$\therefore d\mathbf{B}_x = dB \cos \theta$$

$$\cos \theta = \frac{R}{\sqrt{x^2 + R^2}}$$

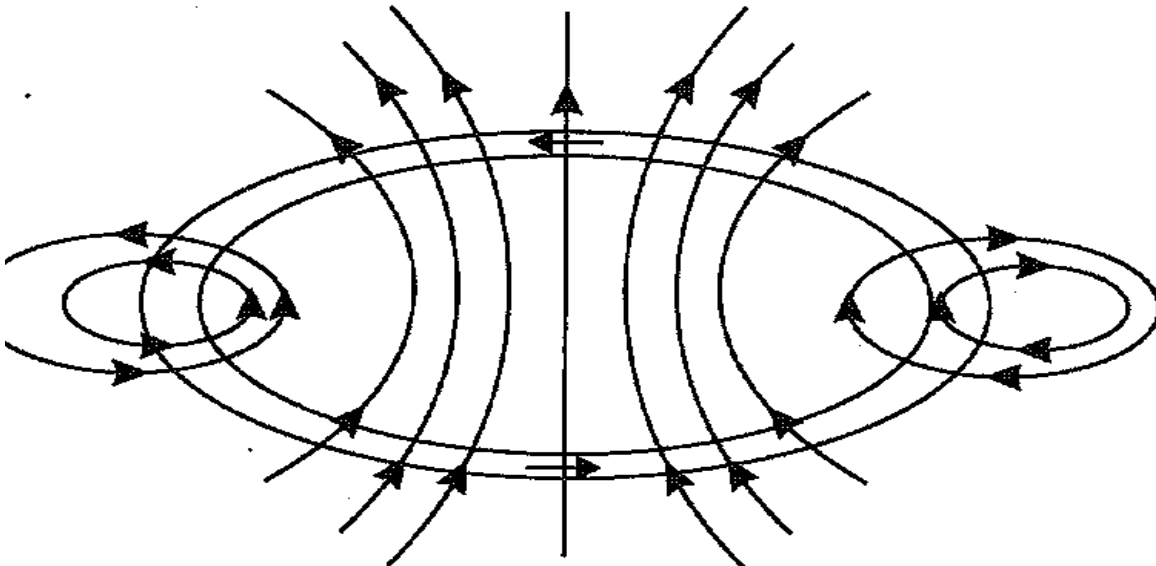
$$d\mathbf{B}_x = \frac{\mu_0 I dl}{4\pi} \cdot \frac{R}{(x^2 + R^2)^{3/2}}$$

But,  $\int dl = 2\pi R$

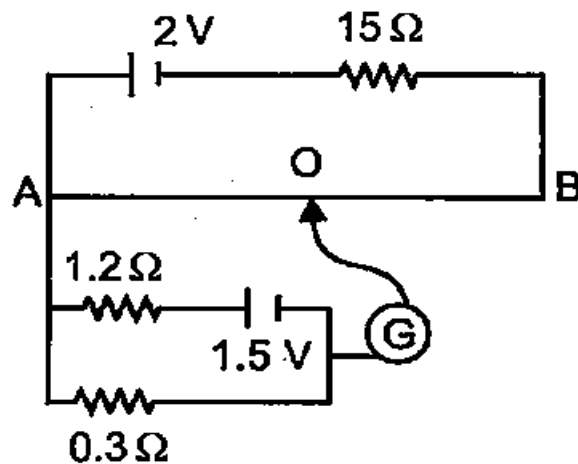
So, 
$$B = \frac{\mu_0 IR \times 2\pi R}{4\pi(x^2 + R^2)^{3/2}}$$

For  $n$  turns in the circular loop,

$$B = \frac{\mu_0 n IR^2}{2(x^2 + R^2)^{3/2}} \cdot \hat{i}$$



- (a) State the principle of working of a potentiometer.
- (b) In the following potentiometer circuit AB is a uniform wire of length 1 m and resistance  $10 \Omega$ . Calculate the potential gradient along the wire and balance length AO ( $= l$ ).



23.

(a) **Principle of potentiometer** : The basic principle of potentiometer is that when a constant current flows through a wire of uniform cross-section area then the potential drop across any length of the wire is directly proportional to that length.

A potentiometer is a device used to measure an unknown emf or potential difference and internal resistance of a cell accurately.

**(b)** Total resistance of the primary circuit = 15 + 10 = 25  $\Omega$ ,

$$\text{emf} = 2 \text{ V}$$

$\therefore$  Current in the wire AB

$$I = \frac{2}{25} = 0.08 \text{ A}$$

P. D. across the wire AB = Current  $\times$  Resistance of wire AB

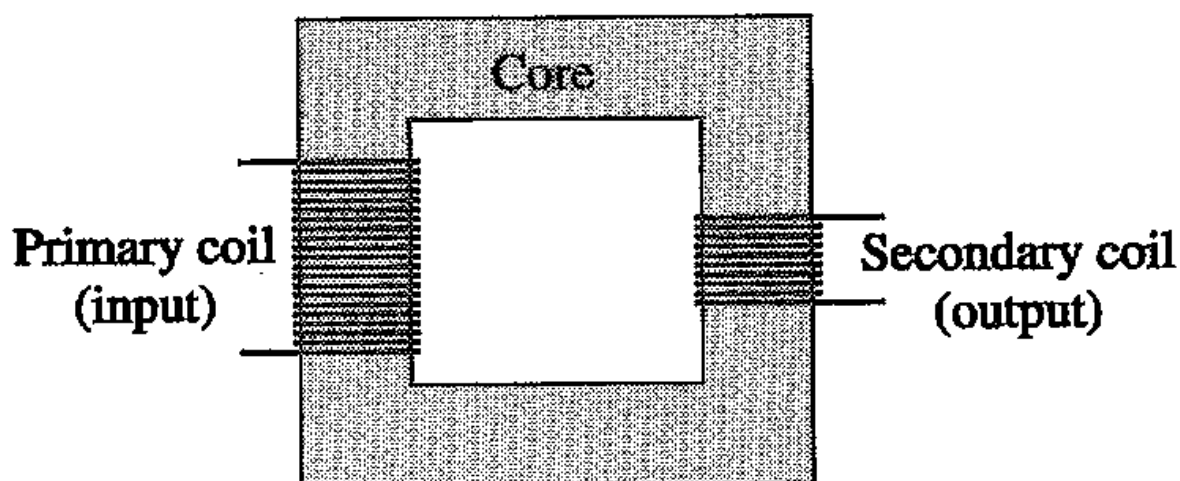
$$= 0.08 \times 10 = 0.8 \text{ V}$$

$$\begin{aligned} \text{Potential gradient} &= \frac{\text{P.D.}}{\text{Length}} = \frac{0.8}{100} \\ &= 0.008 \text{ V cm}^{-1} \end{aligned}$$

### LONG ANSWER TYPE

24. (i) Draw a labelled diagram of a step-down transformer. State the principle of its working.  
(ii) Express the turns ratio in terms of voltages.  
(iii) Find the ratio of primary and secondary currents in terms of turns ratio in an ideal transformer.  
(iv) How much current is drawn by the primary of a transformer connected to 220 V supply when it delivers power to a 110 V— 550 W refrigerator? [5]

**Answer : (i)**



**Principle :** A transformer works on the principle of mutual induction. Whenever the amount of magnetic flux linked with a coil changes, an emf is induced in the neighbouring coil.

**Working :** When an alternating current source is connected to the ends of primary coil, the current changes continuously in the primary coil, due to which magnetic flux linked with the secondary coil changes continuously. Therefore, the alternating emf of same frequency is developed across the secondary terminals. According to Faraday's laws the e.m.f. induced in the primary coil,

$$E_P = -N_P \frac{\Delta\phi}{\Delta t} \quad \dots(i)$$

and emf induced in the secondary coil

$$E_S = -N_S \frac{\Delta\phi}{\Delta t} \quad \dots(ii)$$

From (i) and (ii)

$$\frac{E_S}{E_P} = \frac{N_S}{N_P} = K \quad \dots(iii)$$

For step-down transformer,  $K < 1$ .

$$\therefore E_S < E_P$$

ii) The induced emf in primary coil,

$$E_P = -N_P (d\phi/dt)$$

The induced emf in secondary coil,

$$E_S = -N_S (d\phi/dt)$$

$$E_S/E_P = N_S/N_P = K$$

Where K is the turns ratio or the transformation ratio.

(iv) Given, Power,  $P = 550 \text{ W}$

Supply voltage,  $V_S = 220 \text{ V}$

$$\text{Power} = V_P I_P$$

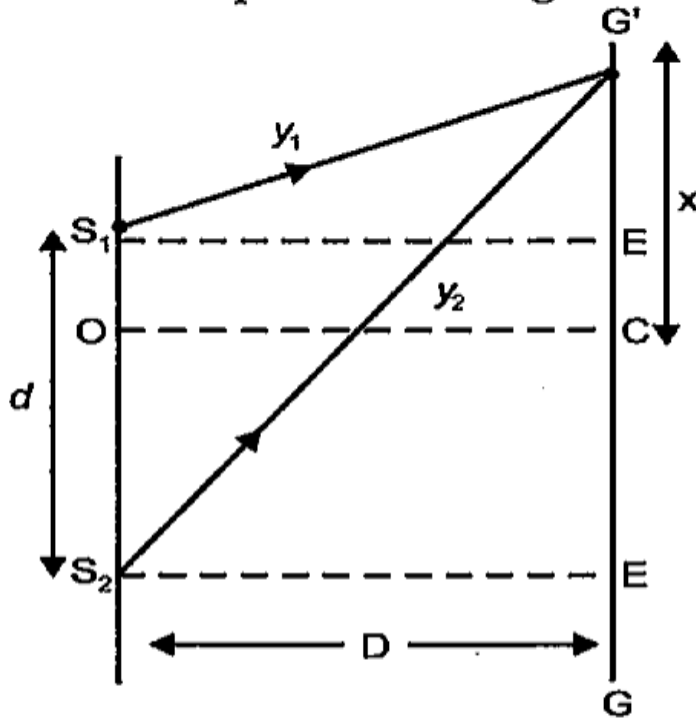
$$550 = 220 \times I_P$$

$$\Rightarrow I_P = 5/2 = 2.5 \text{ A}$$

25. (a) In Young's double slit experiment, deduce the condition for (i) constructive, and (ii) destructive interference at a point on the screen. Draw a graph showing variation of intensity in the interference pattern against position ' $x$ ' on the screen.
- (b) Compare the interference pattern observed in Young's double slit experiment with single slit diffraction pattern, pointing out three distinguishing features. [5]

**Answer : (a)** Let the two waves arising from the slits A and B have the amplitudes  $a$  and  $b$  and the phase difference  $\phi$ . Such that  $y_1 = a \sin \omega t$  and  $y_2 = b \sin (\omega t + \phi)$ .

The resultant displacement is given as :



$$\begin{aligned}
 y &= y_1 + y_2 \\
 y &= a \sin \omega t + b \sin (\omega t + \phi) \\
 y &= a \sin \omega t + b \sin \omega t \cos \phi + b \cos \omega t \sin \phi \\
 y &= (a + b \cos \phi) \sin \omega t + b \sin \phi \cos \omega t
 \end{aligned}
 \tag{i}$$

Let  $a + b \cos \phi = A \cos \delta$  ...(ii)

and  $b \sin \phi = A \sin \delta$  ...(iii)

Hence,  $y = A \sin \omega t \cos \delta + A \cos \omega t \sin \delta$

$$y = A \sin (\omega t + \delta) \tag{iv}$$



Where the amplitude  $A$  of the resultant wave can be given as:

$$A = \sqrt{a^2 + b^2 + 2ab \cos \phi} \quad \dots(\text{v})$$

and  $\tan \delta = \frac{b \sin \phi}{a + b \cos \phi} \quad \dots(\text{vi})$

**(i) Constructive interference** : Intensity  $I \propto A^2$   
and for  $A$  to be maximum

$$\cos \phi = 1$$

or  $\cos \phi = \cos 2n\pi, n = 0, 1, 2, 3, \dots$

$$\phi = 2n\pi \quad \dots(\text{i})$$

and path difference

$$\Delta x = n\lambda \quad \dots(\text{ii})$$

$$A_{\text{max}} = a + b$$

$$I \rightarrow I_{\text{max}} = k(a + b)^2$$

**(ii) Destructive interference** : For  $I$  to be minimum

$$\cos \phi = -1$$

Phase difference :

$$\Delta \phi = (2n + 1)\pi$$

and path difference :

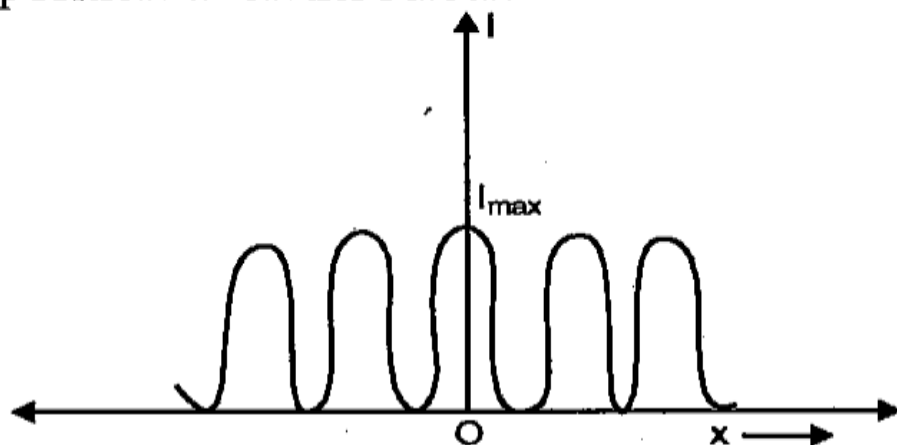
$$\Delta x = (2n + 1) \frac{\lambda}{2}$$

$$A_{\text{min}} = a - b$$

$$I \rightarrow I_{\text{min}} = k(a - b)^2$$

Graph showing interference pattern against position ' $x$ ' on the screen.

Graph showing interference pattern against position 'x' on the screen.

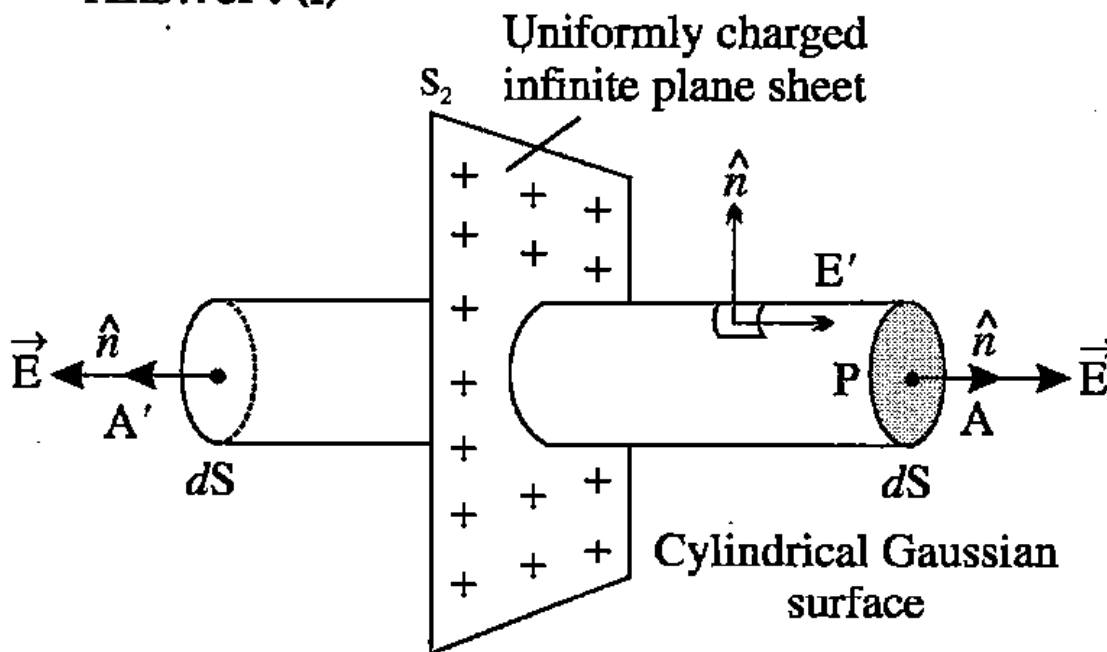


(b) Comparison of interference pattern observed in Young's double slits and the single slit diffraction :

S. No.	Interference	Diffraction
1.	Interference is the result of superposition of secondary waves starting from two different wave fronts originating from two coherent sources.	Diffraction is the result of superposition of secondary waves starting from different part of same wavefront.
2.	All bright and dark fringes are of equal width.	The width of central bright fringe is twice the width of any secondary maximum.

26. (i) Use Gauss's law to find the electric field due to a uniformly charged infinite plane sheet. What is the direction of field for positive and negative charge densities ?
- (ii) Find the ratio of the potential differences that must be applied across the parallel and series combination of two capacitors  $C_1$  and  $C_2$  with their capacitances in the ratio 1 : 2 so that the energy stored in the two cases becomes the same. [5]

Answer : (i)



Consider a thin infinite uniformly charged plane sheet having the surface charge density of  $\sigma$ . The electric field is normally outward to the plane sheet and is same in magnitude but opposite in direction.

Now, draw a Gaussian surface in the form of cylinder around an axis. Let its cross-sectional

area be  $A$ . The cylinder is made from three surfaces  $A$ ,  $S_2$ , and  $A'$  and the electric flux linked with  $S_2$  is 0. So, the total electric flux linked through the Gaussian surface is

$\phi_E =$  electric flux through  $A$  + electric flux through  $S_2$  + electric flux through  $A'$

$$\phi_E = EA \cos 0^\circ + 0 + EA \cos 0^\circ.$$

$$\phi = 2EA \quad \dots(i)$$

According to Gauss theorem,

$$\phi = \frac{q}{\epsilon_0}$$

$$\phi = \frac{\sigma A}{\epsilon_0} \quad (\because q = \sigma A) \dots(ii)$$

From equations (i) and (ii)

$$2EA = \frac{\sigma A}{\epsilon_0}$$

$$E = \frac{\sigma}{2\epsilon_0}$$

The direction of field for positive charge density is in outward direction away from sheet and perpendicular to the plane infinite sheet whereas for the negative charge density the direction becomes inward *i.e.*, towards the sheet and perpendicular to the sheet.

(ii) Given  $C_1 : C_2 = 1 : 2$

$$\Rightarrow C_2 = 2C_1$$

For parallel combination of capacitor,

$$\begin{aligned} C_p &= C_1 + C_2 \\ &= C_1 + 2C_1 = 3C_1 \end{aligned}$$

The energy stored in capacitor

$$\begin{aligned} E &= \frac{1}{2} C_p V_p^2 \\ &= \frac{1}{2} 3C_1 V_p^2 = \frac{3}{2} C_1 V_p^2 \quad \dots(i) \end{aligned}$$

For series combination of capacitor,

$$\begin{aligned} \frac{1}{C_s} &= \frac{1}{C_1} + \frac{1}{C_2} \\ C_s &= \frac{2}{3} C_1 \end{aligned}$$

The energy stored in capacitor

$$\begin{aligned} E &= \frac{1}{2} C_s V_s^2 \\ E &= \frac{C_1 V_s^2}{3} \quad \dots(ii) \end{aligned}$$

Equating equation (i) and (ii), since energy stored in both cases are same

we get,

$$\begin{aligned} \frac{3}{2} C_1 V_p^2 &= \frac{C_1 V_s^2}{3} \\ \frac{V_p}{V_s} &= \frac{\sqrt{2}}{3} \end{aligned}$$

## Answers of MCQ questions

1. (c)
2. (b)
3. (b)
4. (c)
5. (c)
6. (c)
7. (d)
8. (b)
9. (a)
10. (b)

## MODEL PAPER ACCOUNTANCY CLASS 12

- 
- 1 State any one characteristic of Receipts and Payments Account. 1

ANS: (i) Receipts and Payments A/c records all cash receipts on the debit side irrespective of the fact whether they are capital or revenue receipt or whether they relate to current year or previous year or next year.

(ii) Receipts and Payments A/c does not record non-cash items, e.g., depreciation, bad debts etc. (any one)

- 2 List any one feature of the Income and Expenditure Account. 1

ANS: (i) Opening and closing balance of cash and bank are not shown in Income and Expenditure Account.

(ii) Capital receipts and capital payments are excluded from Income and Expenditure Account. (any one)

- 3 Name the account which shows the classified summary of transactions of cash book in a not-for profit organisation. 1

ANS: Receipts and Payments Account

- 4 Distinguish between Income and Expenditure Account and Receipts and Payments Account on the basis of nature of items recorded therein. 1

ANS: Income and Expenditure A/c includes only revenue items related to current year whereas Receipts and Payments A/c includes capital items as well as revenue items whether they are related to

the current year or previous year or next year.

- 5 When the Receipts and Payments Account is converted into an Income and Expenditure Account, an accounting concept is to be followed for the provisions of the Accruals and Outstanding. Name the concept that is followed. 1

ANS: Accrual concept

- 6 State the basis of accounting on which a Receipts and Payments Account is prepared in case of not-for-profit organisation. 1

ANS: Cash Basis Accounting

- 7 Name the term used for denoting 'excess income over expenditure' in case of not-for-profit organisation. 1

ANS: Surplus

- 8 Distinguish between Income and Expenditure Account and Receipts and Payments Account on the basis of nature. 1

ANS: Receipts and Payments A/c is a summary of cash book and its nature is real account whereas Income and Expenditure A/c is just like Profit and Loss A/c and its nature is a nominal account.

- 9 State the term used to denote 'excess of expenditure over income' in case of not-for-profit organisation. 1

ANS: Deficit

- 1 How would you account for 'subscriptions due to be received' in the current year in the books of a nontrading organisation? 1

ANS: 'Subscriptions due to be received' will be added to the account of subscription on the credit side of Income and Expenditure Account and it will be shown on the assets side of the closing balance sheet.

- 1 X, Y and Z are partners sharing profits in the ratio of  $\frac{1}{2}$ ,  $\frac{2}{5}$ , and  $\frac{1}{10}$ . Find the new ratio of remaining partners if Z retires. 1

ANS: New ratio between X and Y = 5:4

[Hint : In the absence of information, new ratio of the remaining partners will be calculated by deleting the share of profit of retiring partner.]

- 1 Murti, Naresh and Omprakash are partners sharing profits in the ratio of 3/8, 1/2 and 1/8. Murti retires  
 2 and surrenders 2/3rd of his share in favour of Naresh and remaining share in favour of Omprakash.  
 Calculate new profit sharing ratio and gaining ratio of the remaining partner. 1

ANS: Gain of Naresh =  $\frac{2}{3} \times \frac{3}{8} = \frac{2}{8}$

Gain of Omprakash =  $\frac{1}{3} \times \frac{3}{8} = \frac{1}{8}$

New ratio of Naresh =  $\frac{1}{2} + \frac{2}{8} = \frac{6}{8}$

New ratio of Omprakash =  $\frac{1}{8} + \frac{1}{8} = \frac{2}{8}$

Thus, the new profit sharing ratio of Naresh and Omprakash is 6 : 2 or 3 : 1.

and gaining ratio among them is  $\frac{2}{8} : \frac{1}{8}$ : or 2 : 1.

- 1 Neetu, Meetu and Teetu were partners in a firm. On 1st January, 2018, Meetu retired. On Meetu's  
 3 retirement, the goodwill of the firm was valued at ₹4,20,000. Pass necessary journal entry for the  
 treatment of goodwill on Meetu's retirement. 1

ANS: As the Profit sharing ratio is not given, it is assumed to be equal. Thus, Meetu's share in profit is  $\frac{1}{3}$ .

Goodwill of the firm = ₹4,20,000

Meetu's share of goodwill = 4,20,000 ×  $\frac{1}{3}$  = 1,40,000

Date	Particulars	L.F.	Dr. (₹)	Cr. (₹)
Jan. 1	Neetu's Capital A/c Dr.		70,000	
	Teetu's Capital A/c Dr.		70,000	
	To Meetu's Capital A/c			1,40,000
	(For adjustment of goodwill on Meetu's retirement)			

- 1 Jamuna, Ganga and Krishna are partners in a firm. Krishna retired from the firm. After making  
 4 adjustments for reserves and revaluation of assets and liabilities, the balance in Krishna's Capital  
 Account was ₹1,20,000. Jamuna and Ganga paid ₹1,80,000 in full settlement to Krishna. Identify the  
 item which Jamuna and Ganga paid ₹60,000 more to Krishna. 1

ANS: Jamuna and Ganga paid ₹60,000 more to Krishna for her share of goodwill.

- 1 On the retirement of Hari from the firm of Hari, Ram and Sharma, the balance sheet showed a debit  
 5 balance of ₹12,000 in the Profit and Loss Account. For calculating the amount payable to Hari this  
 balance will be transferred: 1

- (i) To the credit of the capital accounts of Hari, Ram and Sharma equally.  
 (ii) To the debit of the capital accounts of Hari, Ram and Sharma equally.  
 (iii) To the debit of the capital accounts of Ram and Sharma equally.



(iv) To the credit of the capital accounts of Ram and Sharma equally.

ANS: (ii) The debit balance of profit and loss account will be transferred to the debit of the capital accounts of Hari, Ram and Sharma equally.

1 Give the journal entry to distribute: Investment Fluctuation Reserve of ₹4,000 at the time of retirement  
6 of Z, when Investments (market value ₹19,000) appears at ₹20,000. The firm has three partners X, Y and Z. 1

ANS:

**Journal Entry**

Date	Particulars	L.F.	Dr. (₹)	Cr
	Investment Fluctuation Reserve A/c <span style="float: right;">Dr.</span>		4,000	
	To Investment A/c			1,
	To X's Capital A/c			1,
	To Y's Capital A/c			1,
	To Z's Capital A/c			1,
	(Being investments recorded at market price and excess of investment fluctuation reserve distributed among partners)			

1 Give the journal entry to distribute 'Workmen Compensation Reserve' of ₹70,000 at the time of  
7 retirement of Neeti, when there is a claim of ₹25,000 against it. The firm has three partners Raveena, Neeti and Rajat. 1

ANS:

**Journal Entry**

Date	Particulars	L.F.	Dr. (₹)	C
	Workmen Compensation Reserve A/c <span style="float: right;">Dr.</span>		70,000	
	To Prov. for Workmen Compensation Claim A/c			
	To Ravina's Capital A/c			
	To Neeti's Capital A/c			
	To Rajat's Capital A/c			
	(For surplus in WCR transferred to all partners' capital a/cs in old ratio, i.e., equally)			

1 Give the journal entry to distribute 'Workmen Compensation Reserve' of ₹60,000 at the time of  
8 retirement of Sajjan, when there is no claim against it. The firm has three partners Rajat, Sajjan and Kavita. 1

ANS:

### Journal Entry

Date	Particulars	L.F.	Dr. (₹)	C
	Workmen Compensation Reserve A/c <span style="float: right;">Dr.</span>		60,000	
	To Rajat's Capital A/c			
	To Sajjan's Capital A/c			
	To Kavita's Capital A/c			
	(For WCR transferred to all partner's capital a/cs in old ratio, i.e., equally)			

1 A, B, C, D, X, Y and Z are partners in a firm. During the year A withdrew ₹300 at the beginning of the  
9 each month. B withdrew ₹600 at the end of the each month. C withdrew ₹500 at the middle of the each  
month. D withdrew ₹1,000 at the beginning of the each quarter. X withdrew ₹2,000 at the end of the  
each quarter. Y withdrew ₹5,000 during the year. Z withdrew the following:-

(₹)

April 30, 2017	6,000	
June 30, 2017	4,000	
September 1, 2017	8,000	
December 31, 2017	3,000	
February 28, 2018	5,000	

4

Interest on drawing is to be charged @ 12% p.a. calculate interest on drawings for the year 31st March 2018.

ANS:

$$\text{Interest on A's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{6\frac{1}{2}}{12} = ₹ 300 \times 12 \times \frac{12}{100} \times \frac{6\frac{1}{2}}{12} = ₹ 234$$

$$\text{Interest on B's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{5\frac{1}{2}}{12} = ₹ 600 \times 12 \times \frac{12}{100} \times \frac{5\frac{1}{2}}{12} = ₹ 396$$

$$\text{Interest on C's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{6}{12} = ₹ 600 \times 12 \times \frac{12}{100} \times \frac{6}{12} = ₹ 360$$

$$\text{Interest on D's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{7\frac{1}{2}}{12} = ₹ 1,000 \times 4 \times \frac{12}{100} \times \frac{7\frac{1}{2}}{12} = ₹ 300$$

$$\text{Interest on X's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{4\frac{1}{2}}{12} = ₹ 2,000 \times 4 \times \frac{12}{100} \times \frac{4\frac{1}{2}}{12} = ₹ 360$$

$$\text{Interest on Y's drawings} = \text{Total Drawings} \times \frac{\text{Rate}}{100} \times \frac{6}{12} = ₹ 5,000 \times \frac{12}{100} \times \frac{6}{12} = ₹ 300$$

Z

1	2	3	4 = 2 × 3
Date	Amount Withdrew	Month Outstanding	Product
31st April 2017	6,000	11	66,000
30th June 2017	4,000	9	36,000
1st September 2017	8,000	7	56,000
31st December 2017	3,000	3	9,000
28th February 2018	5,000	1	5,000
		<b>Total Product</b>	<b>1,72,000</b>

$$\text{Interest on Drawings} = \text{Total product} \times \frac{\text{Rate}}{100} \times \frac{1}{12} = 1,72,000 \times \frac{12}{100} \times \frac{1}{12} = ₹ 1,720.$$

- 2 The average profit earned by a firm is ₹75,000 which include undervaluation of stock of ₹5,000 on an average basis. The capital invested in the business is ₹7,00,000 and the normal rate of return is 7%. Calculate goodwill of the firm on the basis of 5 times the super profit. 4

ANS:

Average Profit earned by the firm	75,000
Add: Profit decreased due to under-valuation of stock	5,000
Average Profit	<u>80,000</u>

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= ₹7,00,000 \times \frac{7}{100} = ₹49,000$$

$$\text{Super Profit} = \text{Average Profit} - \text{Normal Profit}$$

$$= ₹80,000 - ₹49,000 = ₹31,000$$

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years' Purchase}$$

$$= ₹31,000 \times 5 = ₹1,55,000.$$

- 2 A business has earned average profits of ₹1,00,000 during the last few years and the normal rate of return in similar business is 10%. Find out the value of goodwill by:

(i) Capitalisation of super profit method and

(ii) Super profit method if the goodwill is valued at 3 years' purchase of super profit.

The assets of the business were ₹10,00,000 and its external liabilities ₹1,80,000.

ANS: (i) Average Profit = ₹1,00,000 (Given)

(ii) Capital Employed ₹8,20,000 (i.e., ₹10,00,000 – ₹1,80,000); Normal Profit ₹82,000 (i.e., ₹8,20,000

$$\times \frac{10}{100});$$

(iii) Super Profit ₹18,000 (i.e., ₹1,00,000 – ₹82,000);

Value of Goodwill :

$$(i) ₹1,80,000 \text{ (i.e., } ₹18,000 \times \frac{10}{10} \text{ )}$$

(ii) ₹54,000 (i.e., ₹18,000 × 3).

2 J and K are partners in a firm. Their capitals are J ₹3,00,000 and K ₹2,00,000. During the year ended 2 30.3.2010 the firm earned a profit of ₹1,50,000. Assuming that the normal rate of return is 20%, calculate the value of goodwill of the firm. 4

(i) By capitalisation method and

(ii) By super profit method if the goodwill is valued at 2 years' purchase of super profit.

ANS: Capital Employed ₹5,00,000 (i.e., ₹3,00,000 + ₹2,00,000)

(i) Capitalised value of average profit ₹7,50,000 (i.e., ₹1,50,000 ×  $\frac{100}{20}$ ),  
Value of Goodwill = ₹2,50,000 (i.e., ₹7,50,000 – ₹5,00,000)

(ii) Normal Profit ₹1,00,000 (i.e., ₹5,00,000 ×  $\frac{20}{100}$ )  
Super Profit ₹50,000 (i.e., ₹1,50,000 – ₹1,00,000)  
Value of Goodwill = ₹50,000 × 2 = ₹1,00,000.

2 A business has earned average profits of ₹1,00,000 during the last few years. Find out the value of 4  
3 goodwill by capitalisation method, given that the assets of business are ₹10,00,000 and its external liabilities are ₹1,80,000. The normal rate of return is 10%.

ANS: Capital Employed ₹8,20,000 (₹10,00,000 – ₹1,80,000)

Capitalised value of average profit ₹10,00,000 (i.e., ₹1,00,000 ×  $\frac{100}{10}$ )  
Value of goodwill = ₹1,80,000 (i.e., 10,00,000 – 8,20,000)

2 The Partnership agreement between Maneesh and Girish provides that:

4 (i) Profits will be shared equally;

(ii) Maneesh will be allowed a salary of ₹400 p.m;

(iii) Girish who manages the sales department will be allowed a commission equal to 10% of the net profits, after allowing Maneesh's salary;

(iv) 7% p.a. interest will be allowed on partner's fixed capital;

(v) 5% interest will be charged on partner's annual drawings;

(vi) The fixed capitals of Maneesh and Girish are ₹1,00,000 and ₹80,000 respectively. Their annual drawings are ₹16,000 and ₹14,000 respectively. The net profit for the year ending March 31, 2013 amounted to ₹40,000. 6

Prepare firm's Profit and Loss Appropriation Account.

ANS:

**Profit and Loss Appropriation A/c**

**Dr.** for the year ended 31st March, 2017

Particulars	Amount (₹)	Particulars	
To Maneesh's Salary A/c	4,800	By Profit and Loss A/c (Net Profit)	
To Girish's Commission A/c	3,520	By Interest on Drawings A/c:	
$\left[ ₹ 40,000 - ₹ 4,800 \times \frac{10}{100} \right]$		Maneesh's Current A/c	800
To Interest on Capital A/c:		Girish's Current A/c	700
Maneesh's Current A/c	7,000		
Girish's Current A/c	5,600		
To Current A/c:			
Maneesh	10,290		
Girish	10,290		
	<u>41,500</u>		

2 A and B entered into partnership on 1st April, 2016 without any partnership deed. They introduced 5 capitals of ₹5,00,000 and ₹3,00,000 respectively. On 31st October, 2016, A advanced ₹2,00,000 by way of loan to the firm without any agreement as to interest.

The profit and loss account for the year ended 31.03.2017 showed a profit ₹4,30,000 but the partners could not agree upon the amount of interest on loan to be charged and the basis of division of profits. Pass a journal entry for the distribution of profit between the partners.

ANS: (i) Interest on Loan = Loan Amount  $\times \frac{\text{Rate}}{100} \times \frac{\text{Months}}{12} = 2,00,000 \times \frac{6}{100} \times \frac{5}{12} = ₹5,000$  (ii)  
 Divisible Profit = ₹4,30,000 – ₹5,000 = ₹4,25,000  
 (iii)

**Journal Entry**

Date	Particulars	L.E.	Dr. (₹)	Cr. (₹)
	Profit and Loss Appropriation A/c <span style="float: right;">Dr.</span>		4,25,000	
	To A's Capital A/c			2,12,500
	To B's Capital A/c			2,12,500
	(For distribution of profit)			

**[Hint:** In the absence of partnership deed, interest on loan will be charged @ 6% p.a. and profit will be shared equally].

2 A and B are partners in a firm. A is to get a commission of 10% on net profit before charging any 6 commission. B is to be get commission of 10% on net profit after charging all commission. Net profit before charging any commission was ₹2,20,000. Find out the commission of A and B and prepare Profit and Loss Appropriation A/c.

ANS: (i) A's Commission = Net Profit  $\times \frac{\text{Rate}}{100} = 2,20,000 \times \frac{10}{100} = ₹22,000$

$$\text{B's Commission} = \text{Net Profit} \times \frac{\text{Rate}}{100 + \text{Rate}} = (2,20,000 - 22,000) \times \frac{10}{110} = ₹18,000.$$

(ii)

Dr. Profit and Loss Appropriation A/c				Cr.
Particulars		Amount (₹)	Particulars	
Particulars		Amount (₹)	Particulars	
To Commission A/c :			By Net Profit as per Profit and Loss A/c	
A	22,000			
B	18,000	40,000		
To Divisible Profit transferred to Capital A/cs :				
A	$\frac{1}{2}$ 90,000			
B	$\frac{1}{2}$ 90,000	1,80,000		
		2,20,000		
			2,20,000	

2 A, B, C and D are the four partners sharing profit as 4 : 3 : 2 : 1. They earned a profit of ₹1,80,000 for the year ended 31.03.2017. As per the deed they are to charge a commission @ 20% of the profit after charging such commission which they will share as 2 : 3 : 2 : 3.

6

Prepare Profit and Loss Appropriation Account showing the distribution of profits and the share of each partner assuming capital accounts are maintained on fixed capital system.

ANS: (i) Calculation of total commission :

$$\begin{aligned} \text{Commission} &= \text{Net Profit} \times \frac{\text{Rate}}{100 + \text{Rate}} \\ &= ₹1,80,000 \times \frac{20}{100 + 20} = ₹1,80,000 \times \frac{20}{120} = ₹30,000 \end{aligned}$$

(ii)

**Profit and Loss Appropriation A/c**

Dr.

*for the year ending 31st March, 2017*

Particulars	Amount (₹)	Particulars	Amount (₹)
To Commission A/c :		By Net Profit as per Profit and Loss A/c	1,80,00
A (₹ 30,000 × $\frac{2}{10}$ )	6,000		
B (₹ 30,000 × $\frac{3}{10}$ )	9,000		
C (₹ 30,000 × $\frac{2}{10}$ )	6,000		
D (₹ 30,000 × $\frac{3}{10}$ )	9,000		
	30,000		
To Divisible Profit transferred to Current A/cs :			
A $\frac{4}{10}$	60,000		
B $\frac{3}{10}$	45,000		
C $\frac{2}{10}$	30,000		
D $\frac{1}{10}$	15,000		
	1,50,000		
	1,80,000		1,80,00

(iii) Share of each partner:

A = ₹6,000 + ₹60,000 = ₹66,000

B = ₹9,000 + ₹45,000 = ₹54,000

C = ₹6,000 + ₹30,000 = ₹36,000

D = ₹9,000 + ₹15,000 = ₹24,000

2 K and P were partners in a firm sharing profits in 4 : 3 ratio. Their capitals on 01.04.2017 were:

8 K ₹80,000 and P ₹60,000. The partnership deed provided as follows:

(i) Interest on capital and drawings will be allowed and charged @ 12% p.a. and 10% p.a. respectively.

(ii) K and P will be entitled to a monthly salary of ₹2,000 and ₹3,000 respectively.

The profits for the year ended 31.03.2018 were ₹1,00,300. The drawings of K and P were ₹40,000 and ₹50,000 respectively. 6

Prepare Profit and Loss Appropriation Account and Capital Account of K and P for the year ended 31.3.2017 assuming that the capitals of the partners were: (i) fluctuating. (ii) Fixed.

ANS:

**Profit and Loss Appropriation A/c**

Dr.

*for the year ending 31st March, 2017*

Cr.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Interest on Capital A/c:		By Profit (As per Profit and Loss A/c)	1,00,30
K	9,600	By Interest on Drawing	
P	7,200	K $(40,000 \times \frac{10}{100} \times \frac{6}{12})$	2,000
	16,800	P $(50,000 \times \frac{10}{100} \times \frac{6}{12})$	2,500
To Salary A/c:			4,50
K	24,000		
P	36,000		
	60,000		
To Net Profit transfer to capital:			
K $\frac{4}{7}$	16,000		
P $\frac{3}{7}$	12,000		
	28,000		
	1,04,800		1,04,80

**(a) Fluctuating Capital Method:**

Dr.

**Partner's Capital A/c**

Particulars	K (₹)	P (₹)	Particulars	K (₹)
To Drawings A/c	40,000	50,000	By Balance b/d	80,000
To Interest on Drawings A/c	2,000	2,500	By Interest on Capital A/c	9,600
To Balance c/d	87,600	62,700	By Salary A/c	24,000
			By Profit and Loss Appropriation A/c (Profit)	16,000
	1,29,600	1,15,200		1,29,600



(b) Fixed Capital Method:

Dr.

Partner's Capital A/c

Particulars	K (₹)	P (₹)	Particulars	K (₹)
To Balance c/d	80,000	60,000	By Balance b/d	80,000
	80,000	60,000		80,000

Dr.

Partner's Current A/c

Particulars	K (₹)	P (₹)	Particulars	K (₹)
To Drawings A/c	40,000	50,000	By Interest on Capital	9,600
To Interest on Drawings A/c	2,000	2,500	By Salary A/c	24,000
To Balance c/d	7,600	2,700	By Profit and Loss Appropriation A/c (Share of Profit)	16,000
	49,600	55,200		49,600

Note: As the date of drawings is not given, interest is calculated on average basis of 6 months.

Note: As the date of drawings is not given, interest is calculated on average basis of 6 months.

2 A, B and C sharing profits and losses in the ratio of 2:2:1. D was admitted as a new partner with 1/5 share in profit in the firm on 31-03-2017. An extract of their Balance Sheet as at 31st March, 2017 was as follows:

Liabilities	(₹)	Assets	(₹)
Investment Fluctuation Fund	90,000	Investment	3,00,000

Show the accounting treatment investment fluctuation fund in each of the following alternative cases:

**Case 1.** If there is no other information.

**Case 2.** If the market value of investments is ₹3,00,000.

**Case 3.** If the market value of investments is ₹2,60,000.

**Case 4.** If the market value of investments is ₹2,00,000.

**Case 5.** If the market value of investments is ₹3,50,000.

ANS:

### Journal Entries

Date	Particulars	L.F.	Dr. (₹)	Cr.
Case-1	Investment Fluctuation Fund A/c <span style="float: right;">Dr.</span> To A's Capital A/c To B's Capital A/c To C's Capital A/c (For amount of investment fluctuation fund transferred to old partners capital accounts in their old ratio 2 : 2 : 1)		90,000	
Case-2	Same as in Case -1			
Case-3	Investment Fluctuation Fund A/c <span style="float: right;">Dr.</span> To Investment A/c To A's Capital A/c To B's Capital A/c To C's Capital A/c (For surplus amount of investment fluctuation fund transferred to old partners capital accounts in their old ratio 2 : 2 : 1)		90,000	
Case-4	Investment Fluctuation Fund A/c <span style="float: right;">Dr.</span> Revaluation A/c <span style="float: right;">Dr.</span> To Investment A/c (For short fall in the value of investment charged from revaluation a/c)		90,000 10,000	1,

	A's Capital A/c <span style="float: right;">Dr.</span> B's Capital A/c <span style="float: right;">Dr.</span> C's Capital A/c <span style="float: right;">Dr.</span> To Revaluation A/c (For loss on revaluation transferred to old partners' accounts in their old ratio 2 : 2 : 1)		4,000 4,000 2,000	
Case-5	Investment Fluctuation Fund A/c <span style="float: right;">Dr.</span> To A's Capital A/c To B's Capital A/c To C's Capital A/c (For amount of investment fluctuation fund transferred to old partners' capital accounts in their old ratio 2 : 2 : 1)		90,000	
	Investment A/c <span style="float: right;">Dr.</span> To Revaluation A/c (For increase in value of investment transferred to revaluation a/c)		50,000	
	Revaluation A/c <span style="float: right;">Dr.</span> To A's Capital A/c To B's Capital A/c To C's Capital A/c (For profit on revaluation transferred to old partners' capital a/cs in their old ratio 2 : 2 : 1)		50,000	

3 Give the necessary journal entries in the books of the firm on admission of a partner:-

- 0 (i) Land is to be decreased to ₹55,000 (Book value of land ₹70,000) 6  
 (ii) Out of the Insurance premium which was debited to Profit & Loss A/c ₹2,000 to be carried forward to the next year.

- (iii) A creditor of ₹7,000 is not likely to be claimed and hence are to be written back.
- (iv) Provision for bad debts is in excess by ₹1,200.
- (v) Outstanding bills for repairs ₹1,000 will be provided for.
- (vi) Building is to be reduced by ₹20,000 (Book value ₹1,00,000)

ANS:

**Journal Entries**

Date	Particulars	L.F.	Dr. (₹)	Cr.
(i)	Revaluation A/c To Land A/c (For decrease in value of land recorded)	Dr.	15,000	
(ii)	Prepaid Expenses A/c To Revaluation A/c (For prepaid expenses recorded)	Dr.	2,000	
(iii)	Creditors A/c To Revaluation A/c (For decrease in value of creditors recorded)	Dr.	7,000	
(iv)	Provision for doubtful debts A/c To Revaluation A/c (For the decrease in value of provision for bad debts recorded)	Dr.	1,200	
(v)	Revaluation A/c To Outstanding repairs A/c (For outstanding repairs recorded)	Dr.	1,000	
(vi)	Revaluation A/c To Building A/c (For decrease in the value of building recorded)	Dr.	2,000	

3 Give the necessary journal entries in the books of the firm on admission of a partner:-

- 1 (i) A Provision of 5% is to be created for doubtful debts on debtors which were ₹34,000.
- (ii) Debtors and provision for debtors appeared at ₹40,000 and ₹2,000 respectively, all debtors are now considered good.
- (iii) Patents were valueless (Book value of patents ₹5,000)
- (iv) Unrecorded liability for creditors is fixed ₹6,000.
- (v) A claim for damages of ₹20,000 was settled for ₹16,000.
- (vi) A typewriter written off completely was taken by a partner for ₹4,000.

6

ANS:

**Journal Entries**

Date	Particulars	L.F.	Dr. (₹)	Cr.
(i)	Revaluation A/c To Provision for doubtful debts A/c (For increase in value of provision for doubtful debts recorded)	Dr.	1,700	
(ii)	Provision for doubtful debts A/c To Revaluation A/c (For the decrease in value of provision for doubtful debts recorded)	Dr.	2,000	
(iii)	Revaluation A/c To Patents A/c (For the decrease in value of patents recorded)	Dr.	5,000	

(iv)	Revaluation A/c To Creditors A/c (For value of Creditors recorded)	Dr.	6,000
(v)	Claim for damages A/c To Revaluation A/c To Cash/ Bank A/c (For settlement of claim and decrease in value of claim recorded)	Dr.	20,000
(vi)	Typewriter A/c To Revaluation A/c (For typewriter recorded in books)	Dr.	4,000
	Partner's Capital A/c To Typewriter A/c (For typewriter taken away by a partner)	Dr.	4,000

3 Give journal entries for the following transactions to record the realisation of various assets and  
2 liabilities:

- (i) The firm has stock of ₹1,60,000. Aziz, a partner took over 50% of the stock at a discount of 20%,
- (ii) Remaining stock was sold at a profit of 30% on cost,
- (iii) Land and Building (book value ₹1,60,000) sold for ₹3,00,000 through a broker who charged 2%,  
commission on the deal. 6
- (iv) Plant and Machinery (book value ₹60,000) was handed over to a Creditor at an agreed valuation of  
10% less than the book value,
- (v) Investment whose face value was ₹4,000 was realised at 50%.

ANS:

#### Journal of P and Q

Date	Particulars	L.F.	Dr. (₹)	Cr.
(i)	Realisation A/c To Aziz's Capital A/c (For 50% stock taken over by a partner)	Dr.	64,000	
(ii)	Realisation A/c To Cash/Bank A/c (For 50% stock realised)	Dr.	1,04,000	1,
(iii)	Realisation A/c To Cash/Bank A/c (For a land and building realised)	Dr.	2,94,000	2,
(iv)	No entry			
(v)	Realisation A/c To Cash/Bank A/c (For Investment realised at 50%)	Dr.	2,000	

3 Pass the necessary Journal entries for the following transactions on the dissolution of the firm of Sudha  
3 and Shiva after the various assets (other than cash) and outside liabilities have been transferred to  
Realisation Account: 6

- (i) Sudha agreed to pay off her husband's loan ₹ 19,000.
- (ii) A debtor whose debt of ₹ 9,300 was written off in the books paid ₹ 7,500 in full settlement.
- (iii) Shiva took over all investments at ₹ 13,300.
- (iv) Sundry creditors ₹ 10,000 were paid at 9% discount.
- (v) Realisation expenses ₹ 3,400 were paid by Sudha for which she was allowed ₹ 3,000.
- (vi) Loss on realisation ₹ 9,400 was divided between Sudha and Shiva in 3 : 2 ratio.

ANS:

**Journal of Sudha and Shiva**

Date	Particulars	L.F.	Dr. (₹)	Cr.
(i)	Realisation A/c <span style="float: right;">Dr.</span> To Sudha's Capital A/c (For Sudha's husband's loan taken over by Sudha)		19,000	
(ii)	Cash/Bank A/c <span style="float: right;">Dr.</span> To Realisation A/c (For bad debt realised)		7,500	
(iii)	Shiva's Capital A/c <span style="float: right;">Dr.</span> To Realisation A/c (For investments taken over by Shiva)		13,300	
(iv)	Realisation A/c <span style="float: right;">Dr.</span> To Cash/Bank A/c (For creditors of ₹ 10,000 paid at a discount of 10%)		9,100	
(v)	Realisation A/c <span style="float: right;">Dr.</span> To Sudha's Capital A/c (For realisation expenses ₹ 3,400 borne by Sudha and ₹ 3,000 allowed to her)		3,000	
(vi)	Sudha's Capital A/c <span style="float: right;">Dr.</span> Shiva's Capital A/c <span style="float: right;">Dr.</span> To Realisation A/c (For loss on realisation transferred to partners' capital a/cs)		5,640	3,760

3 Parul, Payal and Priyanka are partners. They decided to dissolve their firm. Pass necessary journal  
4 entries for following after various assets (other than cash and bank) and the third party liabilities have  
been transferred to Realisation Account.

- (i) There were total debtors of ₹ 76,000. A provision of bad and doubtful debts also stood in the books at ₹ 6,000. Debtors amounting to ₹ 12,000 proved bad and rest paid the amount due.
- (ii) Parul agreed to pay off her husband's loan of ₹ 7,000 at a discount of 5%.
- (iii) A machine which was not recorded in the books was taken over by Payal at ₹ 3,000 whereas its expected value was ₹ 5,000.
- (iv) A contingent liability (not provided for) of ₹ 4,000 was also discharged.
- (v) The firm had a debit balance of ₹ 27,000 in the Profit and Loss Account on the date of dissolution.
- (vi) Priyanka paid the realisation expenses of ₹ 15,000 out of her pocket and she was to get a fixed remuneration of ₹ 18,000 for completing dissolution process.

6

ANS:

Date	Particulars	L.F.	Dr. (₹)	Cr.
(i)	Cash A/c Dr. To Realisation A/c (For cash received on realisation of debtors)		64,000	
(ii)	Realisation A/c Dr. To Parul's Capital A/c (For loan of Parul's husband is taken over by Parul)		6,650	
(iii)	Payal's Capital A/c Dr. To Realisation A/c (For an unrecorded asset taken over by Payal)		3,000	
(iv)	Realisation A/c Dr. To Cash A/c (For payment made for a contingent liability)		4,000	
(v)	Parul's Capital A/c Dr. Payal's Capital A/c Dr. Priyanka's Capital A/c Dr. To Profit & Loss A/c (For accumulated loss transferred to all partners' capital accounts in their profit sharing ratio)		9,000 9,000 9,000	
(vi)	Realisation A/c Dr. To Priyanka's Capital A/c (For remuneration payable to Priyanka for dissolution of the firm)		33,000	

3 X, Y and Z are partners in a firm sharing profits and losses in the ratio of 3 : 2 : 1 respectively. On 31st  
5 March, 2017 their capitals were ₹45,000; ₹30,000 and ₹15,000 respectively. Creditors on that date  
were of ₹20,000. The partnership was dissolved on that date. X took up the stock at an agreed price of 6  
₹25,000. Y took up furniture at ₹5,000 and Z took up debtors at ₹18,500. Prepare necessary accounts  
at the time of dissolution of firm.

ANS:

#### Memorandum Balance Sheet

Liabilities	Amount (₹)	Assets	Amou
Creditors	20,000	Sundry Assets	1,
X's Capital	45,000	(Balancing Figure)	
Y's Capital	30,000		
Z's Capital	15,000		
	1,10,000		1,

**Dr. Realisation A/c**

Particulars	Amount (₹)	Particulars	Amount (₹)
To Sundry Assets A/c	1,10,000	By Creditors A/c	
To Cash A/c (Realisation Expenses)	20,000	By X's Capital A/c (Stock)	
		By Y's Capital A/c (Furniture)	
		By Z's Capital A/c (Debtor)	
		By Loss transferred to Capital A/cs of:	
		X	30,750
		Y	20,500
		Z	10,250
	1,30,000		1,30,000

**Dr. Partners' Capital A/c**

Particulars	X (₹)	Y (₹)	Z (₹)	Particulars	X (₹)	Y (₹)
To Realisation A/c (Assets)	25,000	5,000	18,500	By Balance b/d	45,000	30,000
To Realisation A/c (Loss)	30,750	20,500	10,250	By Cash A/c (Final Settlement)	10,750	
To Cash A/c (Final Settlement)		4,500				
	55,750	30,000	28,750		55,750	30,000

**Dr. Cash A/c**

Particulars	Amount (₹)	Particulars	Amount (₹)
By X's Capital A/c (Cash brought in)	10,750	By Realisation A/c (Creditors)	
To Z's Capital A/c (Cash brought in)	13,750	By Y's Capital A/c (Final payment)	
	24,500		

3 Hanif and Jubed were partners in a firm sharing profits in the ratio of their capitals. On 31st March, 2013 6  
6 their Balance Sheet was as follows :



**Balance Sheet of Hanif and Jubed**  
*as on 31st March, 2013*

Liabilities	Amount (₹)	Assets	Amount
Creditors	1,50,000	Bank	2,00,000
Workmen's Compensation Fund	3,00,000	Debtors	3,40,000
General Reserve	75,000	Stock	1,50,000
Hanif's Current Account	25,000	Furniture	4,60,000
Capitals:		Machinery	8,20,000
Hanif	10,00,000	Jubed's Current Account	1,50,000
Jubed	5,00,000		
	20,50,000		20,50,000

On the above date the firm was dissolved.

- (i) Debtors were realised at a discount of 5%. 50% of the stock was taken over by Hanif at 10% less than the book value. Remaining stock was sold for ₹65,000.  
(ii) Furniture was taken over by Jubed for ₹1,35,000. Machinery was sold as scrap for ₹74,000.  
(iii) Creditors were paid in full.  
(iv) Expenses on realisation ₹8,000 were paid by Hanif.  
Prepare Realisation Account.

ANS:

Realisation A/c			
Particulars	Amount (₹)	Particulars	Amount
To Debtors A/c	3,40,000	By Creditors A/c	1,50,000
To Stock A/c	1,50,000	By Bank A/c (Assets realised):	
To Furniture A/c	4,60,000	Debtors (₹ 3,40,000 – 5%)	3,23,000
To Machinery A/c	8,20,000	Stock	65,000
To Bank A/c (Creditors)	1,50,000	Machinery	74,000
To Hanif's Capital A/c	8,000	By Hanif's Capital A/c (Stock)	
(Realisation Expenses)		(75,000 – 10%)	67,500
		By Jubed's Capital A/c (Furniture)	1,35,000
		By Loss transferred to:	
		Hanif's Capital A/c	7,42,333
		Jubed's Capital A/c	3,71,167
	19,28,000		19,28,000