छत्तीसगढ़ माध्यमिक शिक्षा मण्डल, रायपुर

0;kogkfjd vFk'kkL=

d{kk XII

lEiw.kZ i'u&i=

¼fo|kfpr bdkbZ½

NÙkhlx< ek/;fed f'k{kk e.My] jk;iqj

i'u & i= dh ;ktuk

Scheme of Question Paper

fo"k;%& 0;ogkfjd vFk'kkL= ,o okf.kfT;d Hkxky i.kkd % 100
fo"k; dkM&331 le; % 3 ?kV

ijh{kk % gk;j ld.Mjh

¼v½ 'k{kf.kd mnn'; d vuqlkj eku

(A) Weightage as per Educational objective:

lO ØO	mnn';		vd	ifr'kr
1-	Kku (Knowledge)		35	35%
2-	vock/k (Understanding)		50	50%
3-	vuqi;kx ,o dk'ky (Application & Skill)		15	15%
		;kx	100	100%

¼c½ bdkbokj vdk dk eku

lOØO	bdkbZ dk uke	bdkbZ ij vkcfVr vd	i'u&i= d ik:i vuqlkj vkcfVr vd
1-	fofue; o ckt+kj	10 vd	10
2-	forj.k] yxku] etnjh] C;kt] ykHk o jk"Vªh; vk;	10 vd	10
3-	i.k ifr;kfxrk] vi.k ifr;kfxrk] ,dkf/kdkj] ckt+kj eY;] lkekU; eY;	10 vd	10
4-	jkt+Lo] dUnªh; ctV o djkjki.k	10 vd	10
5-	vkfFkd fu;kt+u	10 vd	10
6-	lglc/k	10 vd	10
7-	fopj.k ,o fopj.k lpdkd	10 vd	10
8-	Hkkjr e mnkjhdj.k	10 vd	10
9-	flpkbZ ,o Qly	10 vd	10
10-	Hkkjr d ie[k m|kx	10 vd	10

¼l½ dfBukbZ Lrj (Difficulty Level)

lO ØO	mnn';	vd	ifr'kr
1-	ljy (Easy)	35	35%
2-	vkSlr (Average)	50	50%
3-	dfBu (Difficult)	15	15%
	;kx	100	100%

¼n½ i'ui= fn'kk fun'k ,oa fodYi ;kstuk %&

(Instruction's & Scheme of Option for Question Paper)

- oLrfu"B i'u e ¼05½ cgfodYih; i'u rFkk ¼05½ fjDr LFkkuksa dh ifr@mfpr tkMh cuk, dk i'u fn;k tkoxk vkj ;g iR;d lVs e i'u Øekd 1 gkxk A
- iR;d lVs e 1] 2 ,oa 3 vadk d i'uksa e fHkUurk jgxh A leLr 04 vad ;k bl l vf/kd vadk d y?kmÙkjh; rFkk nh?kmÙkjh; i'uksa e fodYi fn;k tkuk g A fodYi i'u mlh bdkbZ l rFkk leku mnn';k d jgx A 04 vad ;k bl l vf/kd vadk d i'u iR;d lVs ,d leku jgx A
- vf/kdre mÙkj lhek vfry?kmÙkjh; ½2 vad@30 'kCn½ ¼3 vad@50 'kCn½
  y?kmÙkjh; ¼4 vad@75 'kCn½ ¼5 vad@150 'kCn½
  nh?kmÙkjh; ¼6 vad ;k vf/kd@250 'kCn½

i'u & i= dk CyfiUV

Blue Print of Question Paper

fo"k;%& 0;ogkfjd vFk'kkL= ,o okf.kfT;d Hkxky i.kkd % 100

fo"k; dkM&331 le; % 3 ?kV

ijh{kk % gk;j ld.Mjh

bdkb l-Ø-	bdkb	bdkb ij vkcfVr vd	vdokj i'u						dy i'u
			1 vd	2 vd	3 vd	4 vd	5 vd	6 vd	
1	fofue; o ckt kj	10	2	1	&	&	&	1	2
2	forj.k] yxku] etnjh] C;kt] ykHk o jk"Vh; vk;	10	3	&	1	1	&	&	2
3	i.k ifr;kfxrk] vi.k ifr;kfxrk] ,dkf/kdkj] ckt kj eY;] lkekU; eY;	10	&	1	1	&	1	&	3
4	jkt Lo] dUnh; ctV o djkjki.k	10	3	&	1	1	&	&	2
5	vkfFkd fu;kt u	10	2	1	&	&	&	1	2
6	lglc/k	10	&	1	&	2	&	&	3
7	fopj.k ,o fopj.k lpdkd	10	&	1	1	&	1	&	3
8	Hkkjr e mnkjhdj.k	10	&	1	&	2	&	&	3
9	flpkb ,o Qly	10	&	1	1	&	1	&	3
10	Hkkjr d ie[k m|kx	10	&	1	1	&	1	&	3
	;kx	100	10	8	6	6	4	2	26
	oLrfu"V ¼10 x 1½ uEcj dk i'u								1
						dy i'u			27

Set - A

gk;j ld.Mjh Ldy lVhfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; %& (Subject) - 0;k- vFk'kkL= **le; 3 ?k.Vk (Time- 3 Hrs)**

d{kk %& (Class) -12oh **i.kkd 100 (M.M.)**

(Instruction) & ¼fun'k½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vd fu/kkfjr g A nk dky[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vd vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 09 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 09 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 10 l i'u Øekd 15 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 10 to 15 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 16 l i'u Øekd 21 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 16 to 21 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- i'u Øekd 22 l i'u Øekd 25 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 05 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 100 'kCn A

Q. No. 22 to 25 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- i'u Øekd 26 l i'u Øekd 27 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 06 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 150 'kCn A

Q. No. 26 to 27 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

lk'Uk 1 ¼v½ Lkgh f0kdYlk PkfUk, &

¼1½ TkCk nk 0¸kfDRk vlkUkh LkOkkvk ¸kk 0kLRkvk dk lkR¸k{k : lk Lk vknkUk&lknkUk djRk g] Rkk bLk lkdkj d f0kfUkEk¸k dk dgRk g&

¼v½ Ekæk f0kfUkEk¸k ¼c½ vlkR¸k{k f0kfUkEk¸k

¼l½ 0kLRk f0kfUkEk¸k ¼n½ bUkEk Lk dkb UkghA

¼2½ CkkTkkj Lk gEk LkEkÖkRk g&

¼v½ ,d LklIk.k {k«k ¼c½ ,d LFkkUk {k«k

¼l½ ,d UkXkj ¼n½ ,d lkkRk A

¼3½ djkjklk.k dk Ek[¸k mí'¸k g&

¼v½ YkkXkk dh vk¸k Ck<kUkk ¼c½ Ekæk dk PkYkUk Ck<kUkk

¼l½ vk¸k dk dæhdj.k ¼n½ vFkZ;oLFkk dk fu;eu ,o fu;=.k djuk

¼4½ f0kÙk Ek«kkYk¸k }kjk Rk¸kkj CkTkV dk LkOklkFkEk j[kk TkkRkk g&

¼v½ LkLkn Ek ¼c½ YkkdLkHkk Ek

¼l½ jkT¸kLkHkk Ek ¼n½ Ekf«kEkMYk Ek A

¼5½ Hkf0k"¸k LkCk/kh vk0k'¸kdRkkvk lkj vf/kd /¸kkUk fn¸kk TkkRkk gA

¼v½ 0¸kfDRk f0kPk Ek ¼c½ jkTkL0k Ek

¼l½ mlk¸kDRk nkUkk Ek ¼n½ bUkEk Lk dkb UkghA

Que 1 (A) Choose the correct alternative -

(i) When two persons transfer their goods and services directly. It is called-

(a) Money exchange (b) Indirect Exchange

(c) Barter Exchange (d) None of the above

(ii) By market we mean -

(a) An area (b) a particular region

(c) a city (d) a country

(iii) The main aim of Taxation is -

(a) Increase the income of people (b) To increase use of money

(c) centralisation of income (d) The discoverage the use of toxic materials.

(iv) Budget prepared by Finance ministry is first placed in -

(a) parliament (b) lok sabha

(c) Rajya sabha (d) cabinet

(v) More attention is paid towards future wants in -

(a) personal finance (b) public finance

(c) both (d) none of the above

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

¼1½ &&&&&&&m|Ekh dk lkjLdkj gkRkk gA

¼2½ EkTknjh Tkk Ekæk d }kjk EkklkIkh TkkRkh g &&&&&&&&EkTknjh dgYkkRkh gA

¼3½ fdLkh n'k Ek ,d 0k"k Ek mRlkUUk dh TkkUk 0kkYkh LkEkLRk 0kLRkvk ,0k Lk0kkvk d EkY¸k dk &&&&&&&&&dgRk gA

¼4½ lkFkEk lkPk0k"kh¸k ¸kkTkUkk &&&&&&&&Lk lkkjHk gb gA

¼5½ fUk¸kEkkUkLkkj dk¸k djUk dh LkCkg lk.kkYkh dk &&&&&&&dgRk gA

(B) Fill in the blanks -

(i) ..... is the reward of entrepreneur.

(ii) Wages which are measured by money is called ..... wages.

(iii) The total value of goods and servies produced in a year in the country is called .....

(iv) Value of services is called .....

(v) The system of systematice working is called as .....

lk'Uk 2- f0kfUkEk¸k dh lkfjHkk"kk nhfTk, A

Define exchange.

lk'Uk 3- LkkE¸k EkY¸k fdLk dgRk g\

What do you mean by normal price?

lk'Uk 4- 0kkf"kd ¸kkTkUkk, D;k g\

What is meant by annual plans?

lk'Uk 5- mPPk LRkj dh LkgLkC/k Lk D;k vk'k;k g\

What is high degree correlation?

lk'Uk 6- f0kPkj.k dh ,d lkfjHkk"kk nhfTk, \

Define dispersion.

lk'Uk 7- fUkTkhdj.k D;k g\

What is privatisation?

lk'Uk 8- Hkkjr Ek Ukgjk }kjk fLkPkkb d nk gkfUk;kk CkRkkb;k \

What are the two demerits of irrigation by canals in India.

lk'Uk 9- fVLdk (TISCO) dk vFk LIk"V dhfTk, \

Explain the meaning of TISCO.

lk'Uk 10- YkXkkUk dk lkHkkf0kRk djUk 0kkYk RkhUk dkj.k fYkf[k,\

Write any three factors affecting rent.

lk'Uk 11- lk.k lkfRk;kkfXkRkk ,0k ,dkf/kdkj Ek vRkj fYkf[k,\ ¼dkb RkhUk½

Distinguish between perfect competiti0n and monopoly. (any 3)

lk'Uk 12- f0kPkj.k dh nk lkfjHkk"kk, fYkf[k,\

Write any two definitions of dispersion.

lk'Uk 13- jkTkL0k dk vf/kdRkEk LkkEkkfTkd dY;kk.k dLk LkHk0k g LkEkÖkkb;k\

How to social welfare possible through public finance? Explain.

lk'Uk 14- Hkkjr Ek XkUUk dh [kRkh d Ekgr0k dk LkEkÖkkb;k ¼dkb RkhUk ½

Explain the importance of surgarcane caltivation in India.

lk'Uk 15- vk/kkjHkRk m|kXk ,0k lkTkhXkRk m|kXk D;k g\

What is basic industry and capital industry?

lk'Uk 16- LkhEkkRk mRlkknRkk fLk)kRk dh EkkU;kRkk, D;k g\ ¼dkb Pkkj½

What are assumpitons of marginal productivity theory of distribution?

(any 4)

¼vFk0kk½

jk"Vh¸k vk¸k Ek 0kf) gRk dkb Pkkj LkÖkk0k nhfTk, \

Give 4 suggestions to increase National Income.

Ik'Uk 17 djkjkIk.k d vk/kfUkd fLk)kRk D¸kk g\

Waht are the modern principles of Taxation?

¼vFk0kk½

CkTkV dk EkgR0k Lk{kIk Ek fYkf[k, \

Explain the importance of Budget in Brief.

Ik'Uk 18- D¸kk LkgLkCk/k dkj.k ,0k Ikfj.kkEk d LkCk/k dk CkRkYkkRkk g\

Does correlation tell us the relationship of cause and effect?

¼vFk0kk½

/kUkkREkd ,0k _.kkREkd LkgLkCk/k dk LkEkÖkkb¸k\

Explain positive and negative correlation.

Ik'Uk 19- LkkRk Ikdkj d fYkfIkfLVd Ek nk EkfgYkkvk }kjk fUkEUk Ikdkj ØEk fn¸k Xk¸k g&

fYkfIkfLVd	A	B	C	D	E	F	G
Ekk/kjh	2	1	4	3	5	7	6
dkEkYk	1	3	2	4	5	6	7

fL0kFkEkUk dk dkfV LkgLkCk/k Xk.kkd KkRk dhfTk,A

Following rank is given by two ladies for 7 type of lipstick -

Lipstick	A	B	C	D	E	F	G
Madhuri	2	1	4	3	5	7	6
Komal	1	3	2	4	5	6	7

Find out coefficient of correlation by spearman's method.

¼vFk0kk½

,d Lkkn¸k IkfRk¸kkfXkRkk Ek nk fUk.kk¸kdk }kjk 11 IkfRk¸kkfXk¸kk dh ØEk I fn¸k

Xk¸k] dkfV LkgLkCk/k Xk.kkd fUkdkfYk¸k&

lkfRk¸kkXkh	A	B	C	D	E	F	G	H	I	J	K
fUk.kk¸kd u-–1	1	2	3	4	5	6	7	8	9	10	11
fUk.kk¸kd u-–2	2	3	1	6	4	5	8	7	10	11	9

In one competition two judges gave the ranks to 11 competants. Find out the correlation.

Competitors	A	B	C	D	E	F	G	H	I	J	K
Judge No. 1	1	2	3	4	5	6	7	8	9	10	11
Judge No. 2	2	3	1	6	4	5	8	7	10	11	9

lk'Uk 20- HkkjRk Ek vkfFkd mnkjhdj.k dh vkOk'¸kdRkk d dkb Pkkj dkj.k fYkf[k,

Explain any 4 reasons for the need of economic liberalization in India.

¼vFkOkk½

vkfFkd mnkjhdj.k d dkb Pkkj YkkHk fYkf[k, \

Write any 4 advantages of economic liberalization.

lk'Uk 21- XkV LkEkÖkkRk d Hkkjrk d fYk, Pkkj vUkdYk IkHkkOk fYkf[k, \

Explain the positive effects of GATT on India.

¼vFkOkk½

Xkj LkEkÖkkRk d Hkkjrk d fYk, Pkkj lkfRkdYk IkHkkOk fYkf[k, \

Explain the negative effects of GATT on India.

lk'Uk 22- lk.k lkfRk¸kkfXkRkk d lkkPk RkROkk dk LlK"V dhfTk, \

Explain the four elements of perfect competition.

¼vFkOkk½

vlk.k lkfRk¸kkfXkRkk d dkb lkkPk f0k'k"kRkk, CkRkYkkb¸k\

Explain any 5 characteristics of imperfect competitons.

lk'Uk 23- fUkEUk vkdMk Lk PkRkFkd f0kPkYkUk KkRk dhfTk, &

vk¸k 0k"k Ek &	15	16	17	18	19	20	21

Nk«kk dh Lk[;kk& 4 6 10 15 12 9 4

Calculate Quartile deviatio from the following date :

Age in year - 15 16 17 18 19 20 21

No. of Student - 4 6 10 15 12 9 4

¼vFkok½

Ckh-dkEk-d 10 Nk«kk d vFk'kkL«k Ek IkkIRkkd fUkEUk g&

43] 48] 65] 57] 31] 60] 37] 48] 78] 59

bUk vkdMk Lk IkEkkIk f0kPkYkUk KkRk dhfTk, A

The marks obtained by 10 students of Economics are as follows -

43, 48, 65, 57, 31, 60, 37, 48, 78, 59

Find out standard deviation from it.

Ik'Uk 24- Ckgmí'kh;k Uknh ?kkVh ;kkTkUkk d dkb IkkPk mí';kk dk LkEkÖkkb;k\

Explain any 5 objectives of multipurpose river valley projects.

¼vFkok½

Ckgmí'kh;k Uknh ?kkVh ;kkTkUkk d dkb IkkPk nk"k fYkf[k, \

Explain any 5 demeritts of multipurpose river valley projects.

Ik'Uk 25- CkM IkEkkUk d m|kXk d IkkPk YkkHk LkEkÖkkb;k\

Explain anyh advantages of large scale industries.

¼vFkok½

fHkYkkb Ek Ykkgk ,Ok bLIkkRk m|kXk d LFkkUkh dj.k d IkkPk dkj.k fYkf[k, \

Give any 5 reasons for the localisation of Iron and Steel industry in Bhilai.

Ik'Uk 26- f0kfUkEk;k d dkb N%dkj.kk dk LIk"V dhfTk,

Explain any six causes of Exchange.

¼vFkok½

LkEk;k d vk/kkj Ikj CkkTkkj fdRkUk Ikdkj d gkRk g\ Ok.kUk dhfTk, \

Classify the market on the basis of time.

Ik'Uk 27- vkfFkd fUk;kTkUk dh LkQYkRkk fdUk&fdUk CkkRkk Ikj fUkHkj djRkh g\ ¼dkb N½

On which factors the success of economic planning depends? Explain. (any 6)

¼vFkOkk½

IkPkOk"kh;k ;kTkUkkvk dk vf/kd IkHkkOkh CkUkkUk gRk LkÖkkOk nhfTk, \ ¼dkb N½

Give suggestions to make five year plans effective. (any 6)

lEiy mRrj lV&,

mRRkj 1¼v½ Lkgh f0kdYlk PkfUk, &

¼1½ ¼l½ 0kLRk f0kfUkEk¸k

½2½ ¼v½ ,d LkIk.k {k«k

¼3½ ¼n½ vFk0;oLFkk dk fu;eu ,o fu;=.k djuk

¼4½ ¼v½ LkLkn Ek

¼5½ ¼c½ jkTkL0k Ek

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

¼1½ ykHk

½2½ udn EkTknjh

¼3½ jk"Vh; m|ku

¼4½ 1 viy 1951

¼5½ fUk¸kk tu

mRRkj 2 ik- LVyh toUl & de vko';d oLrvk l vf/kd vko';d oLrvk d vny&cny dk fofue; dgr gA

mRRkj 3- lkekU; eY; & ik- ek'ky d vulkj fdlh oLr dk lkekU; eY; og g tk vkfFkd 'kfDr;k }kjk nh?kdky e fuf'pr gkrk gA

mRRkj 4- 0kkf"kd ¸kkTkUkk & RkRkh¸k lkPk0k"kh¸k ¸kkTkUkk 31 EkkPk 1966 dk LkEkkIRk gk Xkb Fkh mLkd vUkLkkj PkRkFk ¸kkTkUkk dk 1 vlkYk 1966 Lk lkkjEHk gkUkk Pkkfg, Fkk] fdURk RkRkh¸k ¸kkTkUkk dh vLkQYkRkk lkfj.kkEkL0k:lk vFk0¸k0kLFkk d f0kfHkUUk {k«kk Ek mRlkknUk YkXkHkXk fLFkj gk Xk¸kk FkkA

vr% pkFkh ;ktuk dk dN le; d fy, LFkfxr dj fn;k x;k rFkk mld LFkku ij rhu okf"kd ;ktuk, ykx dh xbA bl okf"kd ;ktuk dgk tkrk gA

mRRkj 5- mPPk LRkj d LkgLkCk/k & TkCk nk Pkjk d Ek/¸k LkgLkCk/k dk Xk.kkd 0-75 vkj 1 d CkhPk lkk¸kk TkkRkk g RkCk bLk mPPk LRkj dk LkgLkCk/k dgk TkkRkk g A

mRRkj 6- f0kPkj.k dh lkfjHkk"kk & lkk- dkUkj d vUkLkkj & fTkLk LkhEkk Rkd 0¸kfDRkXkRk lkn

EkY;kk Ek f0kfHkUUkRkk gkRkh g] mLkd EkkIk dk f0k{kIk.k ;kk f0kPkj.k dgRk gA

mRRkj 7- fUkTkhdj.k & fUkTkhdj.k dk vk'k;k mn;kkXkk d IkCk/k ,0k LkPkkYkUk dk fUkTkh mn;kfEk;kk dk nUkk gA HkkjRk Ek vkfFkd mnkjh.kdj.k UkhfRk vIkUkkUk d dkj.k LkkOkTkfUkd {k«k d fYk, Lkjf{kRk mn;kkXkk d n0kkjk fUkTkh {k«kk d fYk, [kkYk fn, Xk;k g vkj fUk;kEkk dk mnkj CkUkk fn;kk Xk;kk gA bLkhfYk, vkfFkd mnkjhdj.k UkhfRk dk fUkTkhdj.k dh UkhfRk Hkh dgk TkkRkk gA

mRRkj 8- HkkjRk Ek Ukgjk n0kkjk fLkPkkb d nk gkfUk;kk fUkEUk g %&

1- IkkUkh dk vIk0;k;k & fLkPkkb djRk LkEk;k [kRkk Ek vf/kd IkkUkh NkM fn;kk TkkRkk g] bLkLk IkkUkh dk vIk0;k;k gkRkk gA

2- m0kjk 'kfDRk Uk"V & Ukgjk n0kkjk vf/kd fLkPkkb gkUk Lk fUkPkYkh HkfEk dh LkRkg Ikj UkEkd TkEkk gk TkkRkk gA fTkLkLk HkfEk dk mIkTkkÅIkUk dEk gk TkkRkk gA

mRRkj 9- fVLdk (TISCO) **VkVk vk;kjUk ,.M LVhYk dEIkUkh (Tata Iron and Steel Company) ^^ bLkdh LFkkIkUkk LkUk 1907 Ek Lkkdpkh ¼fCkgkj½ Ek gbA

mRRkj 10- YkXkkUk dk IkHkkf0kRk djUk 0kkYk RkhUk dkj.k fUkEUk g %&

1- HkfEk dh mRIkkndRkk

2- HkfEk dh J"BRkk

3- fUkEUk dkfV dh HkfEk dh mRIkkndRkk

mRRkj 11- Ik.k IkfRk;kkfXkRkk vkj ,dkf/kdkj CkkTkkj Ek vRkj&

vRkj dk vk/kkj	Ik.k IkfRk;kkfXkRkk	,dkf/kdkj
1- f0kØRkk dh Lk[;kk	fdLkh 0kLRk dk f0kØRkk doy ,d gh 0;fDr gkrk gA	0kLRk dk f0kØRkk vUkd gkRk gA
2- EkY;k fUk/kkj.k	0kLRk dk EkY;k ,dkf/kdkjh fUkf'PkRk djRkk gA	0kLRk dk EkY;k EkkXk RkFkk IkfRk d LkRkYkUk n0kkjk fUkf'PkRk gkRkk gA
3- Ik0k'k ,0k CkfgXkEkUk	QEkk d Ik0k'k Ikj IkHkk0kIk.k	QEkk dk L0kRk«k Ik0k'k ,0k

: dk0kV gkRkh gA ,0k Ckfgxkekuk gkRkk gA

4- LFkkUkkIkUUk 0kLRk, bLkEk fCkØh gb 0kLRk dh bLkEk 0kLRk dh vUkd dkb LFkkUkkIkUUk 0kLRk Ukgh LFkkUkkIkUUk 0kLRk, gkRkh gA gkRkh

mRRkj 12- f0kPkj.k dh nk Ikfjhkk"kk, %&

1- Mk- CkmYk d vUkLkkj & f0k{kIk.k Iknk d f0kPkj.k dk EkkIk gA

2- LIkhXkYk d vUkLkkj & 0kg LkhEkk Tkgk Rkd Lk[,kk LkCk/kh LkEkd fdLkh Ekk/,k EkY,k d vkLk&IkkLk QYkUk dh Ik0kfRRk j[kRk g mUk LkEkdk dk f0kPkj.k ,kk vIkfdj.k dgYkkRkh gA

mRRkj 13- jkTkL0k Lk vf/kdRkEk LkkEkkfTkd dY,kk.k & IkkPkhUk LkEk,k Ek jkT,k dk dk,k dkQh Lkdf PkRk FkkA 0kRkEkkUk Ek LkEkkTk0kknh Hkk0kUkk d dkj.k jkT,k dk vUkd dY,kk.kdkjh dk,k djUk IkMRk gA 0,kfDRk d TkUEk Lk Ykdj EkR,k Rkd d db dk,k Lkjdkj djRkh gA n'k d Ñ"kd] JfEkd] vUkLkfPkRk TkkfRk] vkfnEk TkkfRk] jkfXk,kk] vf'kf{kRkk vkfn d fYk, djkM #Ik,k [kPk djUk IkMRk gA Lkjdkjh 0,k,k Lk gh n'k f'kf{kRk RkFkk L0kLFk CkUkRkk gA Ckdkjh RkFkk CkhEkkjh Ek HkRRkk ndj Lkjdkj YkkXkk d vkfFkd Lkdv nj djRkh gA

mRRkj 14 Hkkj Rk Ek XkUUk dh [kRkh IkkPkhUk dkYk Lk gh XkUUk dk mRIkknd jgk g A gEkkjk n'k f0k'0k Ek XkUUk dk LkCkLk CkMk mRIkknd n'k g A XkUUk dk EkYk LFkkUk Hkkj Rk gh EkkUkk TkkRkk gA b{k ¼XkUUkk½ d LknHk Ek _Xk0kn Ek fEkYkRk gA 'kDdj fUkEkk.k dYkk Lkh[kUk d fYk, PkhUk d YkkXk IkkVhYkIk«k vkRk FkA bLkk d YkXkHkXk 400 0k"k Ik0k XkUUk Lk 'kDdj dk fUkEkk.k Lk0kIkFkEk Hkkj Rk Ek gh gkUk YkXkk FkkA

1- ,fRkgkfLkd Ekg R0k

2- vk|kfXkd Ekg R0k

3- jkTkXkkj dh IkkfIRk

4- f0kn'kh Ekæk dh IkkfIRk

mRRkj 15 vk/kkjHkRk RkFkk IkTkhXkRk m|kXk & bLk m|kXk Ek Ykkgk ,0k bLIkkRk] LkhEkV]

dk¸kYkk] jkLk¸kfUkd m|kXk] Hkkjh bTkhfUk¸kfjXk m|kXk vkfn 'kkfEkYk gA vk/kkjHkRk RkFkk IkTkhXkRk m|kXk dk mRIkknUk n'k d vkfFkd f0kdkLk Ek Lkgk¸kd gA

mRRkj 16 LkhEkkURk mRIkknd Rkk fLk)kRk dh IkEk[k EkkU¸kRkk fUkEUk Ikdkj g &

1- mRIkknUk Ek Ik¸kDRk Lkk/kUk dh LkEkLRk bdkb¸kk LkEkkUk jgRkh gA

2- ,d Lkk/kUk d CknYk nLkj Lkk/kUk dk IkfRkLFkkIkUk fd¸kk Tkk Lkd Rkk gA

3- mRIkknUk d Lkk/kUk Ik.k XkfRk'khYk gkRk gA

4- ¸kg fLk)kRk nh?kdkYk Ek YkkXk gkRkk gA

5- ¸kg fLk)kRk LkhEkkURk mRIkfRRk gkLk fUk¸kEk Ikj vk/kkfjRk gkRk gA

¼vFkOkk½

Hkkj Rk Ek jk"Vh¸k vk¸k dh 0kf) gRk LkÖkk0k &

1- /kUk dk LkEkkUk f0kRkj.k

2- IkkÑfRkd Lkk/kUkk dk mfPkRk mIk¸kkXk

3- Ckdk dk f0kdkLk

4- IkTkh fUkEkk.k dh nj Ek 0kf)

5- Ñf"k dk mfPkRk f0kdkLk

6- EkgXkkb Ikj jkd

mRRkj 17 0kRkEkkUk dj Ik.kYkh vf/kd ØEkCk) ,0k 0kKkfUkd Ik.k gk Xk¸kh vkj djk dk vk¸k dk IkEk[k Lkk/kUk EkkUkk TkkRkk gA IkkPkhUkdkYk Ek d0kYk Lkk0kTkfUkd 0¸k¸k dh IkfRk gRk ghdj YkXkk¸k TkkRk Fk] fdURk vk/kfUkd LkEk¸k Ek vk¸k dh EkkXk fnUk&IkfRkfnUk jkT¸kk }kjk Ck<Rkh Tkk jgh g 0kRkfYk, fdLkh Hkh ,d dj Lk bLk Ck<Rkh gb EkkXk dh IkfRk Ukgh dh Tkk Lkd Rkh g bLkfYk, Lkjdkj f0kfHkUUk mnn'¸kk dh IkfRk d fYk, dj YkXkkRkh gA

Ikk- ,MEk fLEkFk d Ckkn d vFk'kkfL«k¸kk Uk dN vU¸k fLk)kRkk dk IkfRkIkknUk fd¸kk g] fTkUg dj d vk/kfUkd fLk)kRk dgk TkkRkk gA ¸k fLk)kRk fUkEUkfYkf[kRk g &

1- mRIkknd Rkk dk fLk)kRk

2- YkkPk dk fLk)kRk

3- Lkj YkRkk dk fLk)kRk

4- f0kf0k/kRkk dk fLk)kRk

5- vkfPkR;k dk fLk)kRk

¼vFk0kk½

CkTkV dk Ekg R0k &

1- CkTkV ,d 0k"k d fYk, vk;k&0;k;k dk f0k0kj.k gkRkk gA

2- CkTkV dk fUkEkk.k ,0k mLkd fUk;k«k.k dk dk;k TkfVYk gkRkk gA

3- CkTkV Hkk0kh IkfjfLFkfRk;kk d vUkLkkj Ikfj0kRkUk'khYk Uk gkUk Ikj gkfUk dh vk'kdk jgRkh gA

4- CkTkV Ykkd LkHkk ;kk f0k/kkUkLkHkk Ek IkLRkRk djUk d Ik0k XkIRk j[kk TkkRkk gA

5- CkTkV ,d PkUkkRkh Ik.k dk;k djRkk gA

mRRkj 18 LkgLkCk/k f0k'Yk"k.k nk ;kk vf/kd Pkjk d CkhPk LkCk/k dh fn'kk ,0k Ekk«kk dk CkRkYkkRkk gA ;kg dkj.k ,0k Ikfj.kkEk d CkhPk LkCk/k d f0k"k;k Ek dN Hkh Ukgh CkRkYkkRkk gA 0kkLRk0k Ek LkgLkCk/k f0k'Yk"k.k nk Pkjk Ek ;kg f0kPkj.k dk CkRkYkkRkk gA vFkkRk ,d Pkj Ek Ikfj0kRkUk gkUk Ikj nLkj Pkj Ek fdLk fn'kk Ek RkFkk fdRkUkh Ekk«kk Ek Ikfj0kRkUk gkRkk g ;kg LIk"V djRkk gA ;g dkj.k ,0k Ikfj.kkEk d CkhPk LkCk/kk dh 0;kk[;kk Ukgh djRkk gA

¼vFk0kk½

/kUkkREk d LkgLkCk/k & TkCk nk Pkjk Ek ,d fn'kk Ek Ikfj0kRkUk gkRkk g Rkk mUk Pkjk d CkhPk LkgLkCk/k /kUkkREk d dgYkkRkk gA mnk- & 0kLRk d EkY;k Ek 0kf) gkUk Ikj mLkdh IkfRk Ek Hkh 0kf) gkUkk] nkUkk d CkhPk /kUkkREk d LkgLkCk/k dk CkRkYkkRkk gA

/kUkkREk d LkgLkCk/k

0kLRk dk EkY;k ¼IkfRk b- #- Ek½	10	20	30	40	50
0kLRk dh IkfRk ¼bdkb Ek½	100	120	150	180	250

bLkd f0kIkjhRk TkCk nk Pkjk Ek Ikfj0kRkUk f0kIkjhRk fn'kk Ek gkRkk g vFkkRk ,d Pkj

d EkY¸k Ek 0kf) gkUk Ikj nLkj Pkj Ek d ekx e deh dh gkRkh g] Rkk mUkd CkhPk LkgLkCk/k _.kkREkd gkRkk gA

_.kkREkd LkgLkCk/k

0kLRk dk EkY¸k ¼IkfRk b- #- Ek½	10	20	30	40	50
0kLRk dh IkfRk ¼bdkb Ek½	100	80	60	30	20

mIk¸kDRk RkkfYkdk Ek EkY¸k 0k IkfRk dk Ck<Ukk /kUkkREkd LkgLkCk/k g RkFkk EkY¸k Ck<Uk Ikj EkkXk dEk gkUkk _.kkREkd LkgLkCk/k n'kkRkk gA

mRRkj 19

x series	Rank (x)	y series	Rank (y)	Difference of rank (x – y)	Square of rank d2
2	6	1	7	–1	1
1	7	3	5	2	4
4	4	2	6	–2	4
3	5	4	4	1	1
5	3	5	3	0	0
7	1	6	2	–1	1
6	2	7	1	1	1
$N = 7$		$N = 7$			$\sum d^2 = 12$

$$r = 1 - \frac{6 \times \sum d^2}{N^3 - N}$$

Tkgk r = fLIk¸kjEkUk dk dkfV vRkj Lkg LkCk/k Xk.kkd

$\sum d^2$ = ¼nkUkk Jf.k¸kk d ØEkk Ek vRkj dk ¸kkXk½

N = ¼Iknk dh Lk[¸kk½

vRkh EkkUk j[kUk Ikj

$$r = 1 - \frac{6 \times 12}{7^3 - 7}$$

$$r = 1 - \frac{72}{343 - 7}$$

$$r = 1 - \frac{72}{336}$$

$$r = \frac{264}{336}$$

$$r = 0.7857$$

¼vFkOkk½

mRRkj 20 HkkjRk Ek vkfFkd mnkjhdj.k dh vkOk';kdRkk d vUkd dkj.k g %&

1- jkTkXkkj Ldyk

2- CkTkV ?kkV Ek fUkjURkj 0kf)

3- Ekæk LQhfRk Ek 0kf)

4- IkfRkdYk HkXkRkkUk LkRkYkUk

5- f0kfUk;kkXk <kPk Ikj IkfRkdYk IkHkkOk

6- f0kn'kh _.kk dk Ck<Rkk CkkÖk

7- [kkMh Lkdv

¼vFkOkk½

mnkjhdj.k d YkkHk &

1- vkfFkd mnkjhdj.k Lk Hkkjk dk vkfFkd Lkdv dkQh LkhEkk Rkd dEk gk Xk;kk g ,Ok f0kn'kh f0kfUk;kkXk dh LkhEkk Ck<kUk Lk f0kn'kh Ekæk dk"k Ek dkQh 0kf) gbA

2- LkkOkTkfUkd {k«k d fUkTkhdj.k dk IkkRLkkgUk fEkYkkA bLkLk nk YkkHk g,] IkgYkk Lkjdkj dk Ik;kkIRk /kUk jkf'k fEkYkh vkj fUkTkh gkFkk Ek LkPkkYkUk 0;kOkLFkk TkkUk Lk d'kYkRkk Ek 0kf) gbA

3- bULIkDVj jkTk LkEkkIRk djUk] Ykk;kLkLk YkUk dh vfUkOkk;kRkk LkEkkIRk djUk Lk m|kXk Ek dkQh Lk/kkj gvk g RkFkk fj'OkRk[kkjh 0k Hk"VkPkkj Ek dkQh dEkh vk;kh gA

4- Hkkjrk Ek LkUk 1991 Lk Ykdj vkTk Rkd YkXkkRkkj f0kn'kh lkTkh fUk0k'k lkTkh fUk0k'k Ek 0kf) gk jgh gA vFk0¸k0kLFkk d LkHkh {k«kk Ek vlkUkk ¸kkXknkUk nUk d fYk, f0kn'kk Lk Lkdlk lkLRkk0k lkklRk g, gA

mRRkj 21 XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj vUkdYk lkHkk0k fUkEUk g %&

1- XkV LkEkÖkkRk Lk Hkkjrk d fUk¸kkRk Ek Hkkjh 0kf) dh LkEHkk0kUkk, gA

2- f0kn'kh lkfRk¸kkfXkRkk d dkj.k Hkkjrkh¸k EkkYk dh Xk.k0kRRkk Ek dkQh Lk/kkj gkXkkA

3- lkkÑfRkd :lk Lk lknk gkUk 0kkYkh 0kLRkvk d lkVUV dh vk0k'¸kdRkk Ukgh lkMXkhA

4- f0kn'kh lkTkh fUk0k'k Ek 0kf) gkXkh] fTkLkLk Hkkjrk d vkfFkd Lk/kkj dk¸kØEk Ek RkTkh vk¸kXkhA

¼vFk0kk½

XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj lkfRkdYk lkHkk0k fUkEUk g %&

1- LkhfEkRk Lkk/kUkk d dkj.k Hkkjrkh¸k dElkfUk¸kk Ckgjk"Vh¸k dElkfUk¸kk dh lkfRkLlk/kk Ek fVd Ukgh Lkdxkh A

2- Hkkjrk Ek dN n0kkb¸kk d EkY¸k Ek CkRkgk'kk 0kf) gkXkh] ¸kg EkY¸k 0kf) 40 Lk 100 lkfRk'kRk gk Lkdrkh gA

3- Hkkjrk dh LkEkPkh Lk0kk 0k mRlkknd Rkk 0¸k0kLFkk lkj dN f0kn'kh dElkfUk¸kk dk gLRk{klk gk Tkk,Xkk fTkLkLk Hkkjrk dk Ukdlkkuk gkXkkA

4- vk¸kkfRkRk 0kLRkvk lkj YkXkUk 0kkYk 'kYdk lkj Hkkjh dVkRkh djUkh lkMXkhA

mRRkj 22 lk.k lkfRk¸kkfXkRkk d lkkPk RkR0k fUkEUk g %&

1- ØRkk ,0k f0kØRkkvk dh vf/kd Lk[¸kk

2- mRlkknUk Ek ,d :lkRkk

3- CkkTkkj dh n'kkvk dk lk.k KkUk

4- lkfj0kgUk YkkXkRk dk vHkk0k

¼vFk0kk½

vlk.k lkfRk¸kkfXkRkk d lkkPk f0k'k"kRkk, fUkEUk g %&

1- ØRkk&f0kØRkkvk dh Lk[¸kk LkhfEkRk

2- CkkTkkj dk Ik.k KkUk Ukgh

3- 0kLRkvk Ek ,d :IkRkk Ukgh

4- Ik.k XkfRk'khYkRkk dk vHkk0k

5- IkfRk¸kkfXkRkk dk vHkk0k

6- Ikfj0kgUk dh ÅPkh YkkXkRk

7- EkY¸kk Ek vRkj

8- f0kKkIkUk

mRRkj 23

vk¸k 0k"kk Ek (M)	vk0kfRRk (f)	LkPk¸kh vk0kfRRk (c.f.)
15	4	4
16	6	10
17	10	20
18	15	35
19	12	47
20	9	56
21	4	60

Q_1 = size of $\left(\frac{N+1}{4}\right)^{th}$ item

Q_1 = size of $\left(\frac{60+1}{4}\right)$item

¸kg C.F. 20 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 17 gh Q_1 g A

Q_3 = size of $3\left(\frac{N+1}{4}\right)^{th}$ item

Q_3 = size of $3\left(\frac{60+1}{4}\right)$item

¸kg C.F. 47 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 19 gh Q_3 g A

PkRkFkd f0kPkYkUk Q.D = $\frac{Q_3-Q_2}{2}=\frac{19-17}{2}=\frac{2}{2}=1 years$

PkRkFkd f0kPkYkUk Xk.kkd (Coefficient of Q.D.)

= $\frac{Q_3-Q_1}{Q_3+Q_2}=\frac{19-17}{19+17}=\frac{2}{36}=0.0555$

¼vFk0kk½

ØEkkd	lkn EkY¸k x	dfYlkRk Ekk/¸k Lk f0kPkYkUk dx(A= 60)	f0kPkYkUkk dk 0kXk dx^2
1.	43	–17	289
2.	48	–12	289
3.	65	5	144
4.	57	–3	9
5.	31	29	841
6.	60	0	0
7.	37	–23	529
8.	48	–12	144
9.	78	18	324
10.	59	–1	1
N =10	$\sum x$ =526	$\sum dx$ =–74	$\sum dx^2$ =2306

LkkEkkURkj Ekk/¸k dh Xk.kUkk%&

$$\bar{X} = \frac{\sum x}{N} = \frac{526}{10} = 52.6$$

Tkgk lkj $\bar{X}$ = LkEkkURkj Ekk/¸k

$\sum x$ = lkn EkY¸kk dk ¸kkXk

N = lknk dh Lk[¸kk

lkEkkIk f0kPkYkUk dh Xk.kUkk %&

$$\sigma = \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

$$\sigma = \sqrt{\frac{2306}{10} - \left(\frac{-74}{10}\right)^2}$$

$$\sigma = \sqrt{230.6 - (-7.4)^2}$$

$$\sigma = \sqrt{230.6 - 54.76}$$

$$\sigma = \sqrt{175.84}$$

$$\sigma = 13.26$$

Tkgk σ = IkEkkIk f0kPkYkUk

$\sum dx$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk dk ¸kkXk

$\sum dx^2$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk d 0kXkk dk ¸kkXk

N = Iknk dh Lk[¸kk

mRRkj 24 Ckgnn'¸kh Uknh ?kkVh ¸kkTkUkkvk d mnn'¸k ¼EkgROk½ ¸kk YkkHk vXkfYkf[kRk g &

1- fLkPkkb Lkf0k/kk & Uknh ?kkVh ¸kkTkUkkvk dk IkEk[k mnn'¸k fLkPkkb g A dh vk0k'¸kdRkk dk n[kRk g, ¸k ¸kkTkUkk, CkUkkb Xkb gA

2- Ik¸kVUk LFkYkk dk fUkEkk.k & Ukfn¸kk d ?kkfV¸kk Ek Ckk/k LkEkhIk m|kUk ,0k mIk0kUk

3- EkRL¸k IkkYkUk m|kXk & bUk ¸kkTkUkkvk Ek CkM&CkM TkYkk'k¸kk dk fUkEkk.k gkRkk g] fTkUkEk EkRL¸k IkkYkUk m|kXk dk vkLkkUkh Lk dk¸kkfU0kRk fd¸kk Tkk Lkdkk gA

4- HkfEk dVk0k Ikj jkd & bUk ¸kkTkUkkvk d f0kdkLk Lk RkTk CkgUk 0kkYkh Ukfn¸kk dh XkfRk /khEkh gk TkkRkh g vkj Ckk< fUk¸kf«kRk gk TkkRkk gA

¼vFk0kk½

Ckgnn'kh¸k Uknh ?kkVh ¸kkTkUkk d N% nk"k g

1- db XkkOkk dk MCk TkkUkk

2- mIkTkkÅ [kRkk dk Ckdkj gk TkkUkk

3- Ukgjk Ek vPkUkkd IkkUkh NkMUk Lk fUkPkYk fgLLk Ek gkfUk

4- CkhEkkfj¸kk dk Ikdkik

5- vdkYk EkR¸k

6- vIkR¸k{k 0¸k¸k

mRRkj 25 Hkkjk Ek CkM IkEkkUk d m|kXkk Lk vUkd YkkHk gkRk g] fTkUkEk fUkEUkfYkf[kRk f0k'k"k mYYk[kUkh¸k g %&

1- jk"Vh¸k vk¸k Ek 0kf) & CkM IkEkkUk d m|kXkk d f0kdkLk Lk jk"Vh¸k vk¸k Ek 0kf)

dh Tkk Lkd Rkh gA

2- jkTkXkkj Ek 0kf) & CkM IkEkkUk d m|kXkk dk EkkYk LkLRkk gkRkk g vRkh CkkTkkj Ek EkkXk vf/kd gkRkh gA vf/kd EkkXk dk Ikjh djUk d fYk, m|kXkk dk f0kLRkkj fd,kk TkkRkk gA

3- LkURkfYkRk f0kdkLk & fdLkh n'k d vkfFkd <kPk Ek Lk/kkj ,0k LkURkfYkRk f0kdkLk vk0k',kd gkRkk gA

4- f0kn'kh IkTkh vkdf"kRk & CkM IkEkkUk d m|kXkk dk LkfUk,kkfTkRk f0kdkLk] f0kn'kh f0kfUk,kkDRkkvk dk Hkh vkdf"kRk djRkk gA

5-

¼vFk0kk½

1- dPPkk EkkYk & Ykkgk bLIkkRk m|kXk dk dPPk EkkYk dh IkkfIRk LkCkLk vf/kd IkHkkf0kRk djRkh g] fHkYkkb d fUkdV 32 fdEkh- nj nYYkh&jkTkgjk EkkXk Ek Ykkg v,kLd Ikk,kk TkkUkk bLkd dUæh,kdj.k dk Ek[,k dkj.k gA

2- dk,kYkk ,0k f0k|Rk 'kfDRk & mLk m|kXk d fYk, dk,kYkk Ökfj,kk RkFkk dkjCkk Lk gkRkh g] Tkk fd fHkYkkb d fUkdV gA

3- TkYk IkfRk & fHkYkkb Lk,k«k dk TkYk vkIkfRk RkkUnYkk Ukgj d Tkfj,k] XkXkjYk MEk Lk gkRkk g Tkk bLk LFkkUk Lk UkTknhd gA

4- jYkEkkXk dh Lkf0k/kk & fHkYkkb bLIkkRk Lk,k«k dk EkECkb gk0kMk jYkEkkXk dh Lkf0k/kk IkkIRk g bLkd vfRkfjDRk LkMd EkkXk jk"Vh,k jkTkEkkXk ØEkkd 6 Lk TkMk gA

5- f0kn'kh Rkd Ukhdh & bLk m|kXk d LFkkUkh,kdj.k Ek Lkkf0k,kRk Lk?k ¼Ik0k Ek½ dh Rkd Ukhdh ,0k f0kRRkh,k Lkgk,kRkk IkkIRk gvk gA

mRRkj 26 f0kfUkEk,k d N½ dkj.k fUkEUkfYkf[kRk g &

1- nkUkk Ik{kk dk YkkHk

2- nk jk"Vk dk YkkHk

3- vk0k',kd 0kLRkvk dh IkkfIRk

4- JEk f0kHkkTkUk Lk YkkHk

5- CkkTkkj dk f0kLRkkj

6- IkkÑfRkd Lkk/kUkk dk vf/kdRkEk mIk¸kkXk

7- Tkh0kUk LRkj ÅPkk gkXkkA

8- vURkjk"Vh¸k mUUkfRk Ek Lkgk¸kd

9- vk|kfXkd mUUkfRk Ek Lkgk¸kd

10- LkdV d LkEk¸k Lkgk¸kd

¼vFk0kk½

LkEk¸k d vk/kkj Ikj CkkTkkj Pkkj Ikdkj d gkRk g &

1- vfRk vYIkdkYkhUk ¸kk nfUkd CkkTkkj & bLk Ikdkj d CkkTkkj Ek 0kLRk dh IkfRk fUkf'PkRk jgRkh g bLkEk dkb Ikfj0kRkUk Ukgh fd¸kk Tkk LkdRkk vRkh EkkXk d dkEk gkUk Ikj EkY¸k Ek dEkh RkFkk EkkXk d Ck<Uk Ikj EkY¸k Ek 0kf) gkRkh gA

2- vYIkdkYkhUk CkkTkkj & vYIkdkYkhUk CkkTkkj 0kg g fTkLkEk 0kRkEkkUk Lkk/kUkk dh Lkgk¸kRkk Lk FkkMk CkgRk mRIkknUk ?kVk¸kk ¸kk Ck<k¸kk Tkk LkdRkk gA

3- nh?kdkYkhUk CkkTkkj & fTkLk v0kf/k Ek fdLkh 0kLRk dh IkfRk Ek EkkXk d vUkLkkj Ikfj0kRkUk dk Ik¸kkIRk v0kLkj jgRkk g] mLk v0kf/k d CkkTkkj dk nh?kdkYkhUk CkkTkkj dgRk gA

4- vfRk nh?kdkYkhUk CkkTkkj & vfRk nh?kdkYkhUk CkkTkkj dk LkCk/k bRkUkh YkCkh v0kf/k Lk jgRkk g fTkLkd vURkXkRk mIkHkkDRkk dh :fPk] Q'kUk ,0k L0kHkk0k vkfnA

mRRkj 27 vkfFkd fUk¸kkTkUk dh LkQYkRkk dh fUkEUk CkkRk g &

1- Yk{¸kk dk fUk/kkj.k

2- ¸kkTkUkk dh n'kk

3- fUkf'PkRk v0kf/k

4- IkkFkfEkdRkk

5- fUk¸k«k.k

6- LkEkU0k¸k

7- vU¸k

¼vFkZkk½

lkPk0k"kh¸k ¸kkTkUkkvk dk vf/kd lkHkk0kh CkUkkUk gRk LkÖkk0k &

1- ¸kkTkUkk, vfRk f0k'kkYk ,0k vfRk Ekg R0kkdk{kh Uk gkA

2- lkkFkfEkdRkk dk fUk/kkj.k jk"V d vUkdYk gkA

3- f0kn'kh Lkgk¸kRkk ,0k _.k lkj fUkHkjRkk LkEkklRk gk

4- ¸kkTkUkk dk fUkEkk.k lkEkkf.kRk TkkUkdkfj¸kk d vk/kkj lkj gk

5- Hk"VkPkkj RkFkk /kUk d n#lk¸kkXk lkj dBkj fUk¸k«k.k

6- fUk¸kkRk Lk0k/kUk lkj f0k'k"k CkYk

Set - B

gk;j ld.Mjh Ldy lVhfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; %& (Subject) - 0;k- vFk'kkL= **le; 3 ?k.Vk (Time- 3 Hrs)**

d{kk %& (Class) -12oh **i.kkd 100 (M.M.)**

(Instruction) & ¼fun'k½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vd fu/kkfjr g A nk dky[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vd vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 09 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 09 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 10 l i'u Øekd 15 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 10 to 15 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 16 l i'u Øekd 21 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 16 to 21 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- i'u Øekd 22 l i'u Øekd 25 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 05 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 100 'kCn A

Q. No. 22 to 25 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- i'u Øekd 26 l i'u Øekd 27 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 06 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 150 'kCn A

Q. No. 26 to 27 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

lk'Uk 1¼v½ Lkgh f0kdYlk PkfUk, &

¼v½ ,d EkkYkh Uk dN LkfCTk¸kk fdLkkUk dk ndj vlkUk mlk¸kkXk gRk Xkg fYk¸kk] bLk D¸kk dgXk &

¼v½ nkUk ¼Ck½ 0kLRk f0kfUkEk¸k

¼Lk½ mlkgkj ¼n½ bUkEk Lk dkb Ukgh A

¼Ck½ LFkkUkh¸k CkkTkkj d mnkgj.k g&

¼v½ LkkXk&LkCTkh dk CkkTkkj ¼Ck½ /kkRkh LkkMh dk CkkTkkj

¼Lk½ Ykk[k dh PkfM¸kk dk CkkTkkj ¼n½ LkkUkk Pknh dk CkkTkkj A

¼Lk½ fdLkh Hkh CkTkV dk Ek[¸k mí'¸k gkRkk g&

¼v½ vkfFkd f0kdkLk ¼Ck½ dOkYk vk|kfXkd f0kdkLk

¼Lk½ dOkYk Ñf"k f0kdkLk A ¼n½

¼n½ Hkkjrk Ek LkLkn CkTkV dk LkkEkkU¸kkRkh LOkhÑfRk n nRkh g&

¼v½ 28 Qj0kjh Rkd ¼Ck½ 01 EkkPk Rkd

¼Lk½ 15 EkkPk Rkd ¼n½ 31 EkkPk Rkd A

¼b½ jkTkLOk Ek 0¸kfDRkXkRk f0kPk dh vlk{kk vk¸k d Lkk/kUkk Ek YkkPk&

¼v½ vf/kd gkRkh g ¼Ck½ dEk gkRkh g

¼Lk½ Ckjk Ckj gkRkh g ¼n½ bUkEk Lk dkb UkghA

Que 1 (A) Choose the correct alternative -

(i) One gardener given vegetable to farmer and takes wheat in exchange of it. What is it called.

(a) Donation (b) Barter exchange

(c) Gift (d) None of the above

(ii) It is an example of local market.

(a) Vegetable market (b) Saree, cloth market

(c) Market of Lac bangles (d) Gold-silver market

(iii) The main aim of budget is -

(a) Economic development (b) industrial development

(c) Agriculture development (d) social equality

(iv) Parliament in India passes budget -

(a) upto 28th February (b) 1st march

(c) 15th march (d) 31st march

(v) The flexibility of income from sources compared to private finance in public finance is -

(a) more (b) less

(c) equal (d) none of the above

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

1- C,kkTk] CkkTkkj Ek &&&&&&&&dk mlk,kkXk djUk dh dhEkRk gA

2- fjdkMk d vUkLkkj] fTkLk HkfEk lkj YkXkkUk mRlkUUk Ukgh gkRkk mLk &&&&&&&HkfEk dgRk gA

3- Ekæk dh Ø,k 'kfDRk&&&&&&&&&EkTknjh dk lkHkkf0kRk djRkh gA

4- vUk0kjRk ,kkTkUkk &&&&&&&&&Lk lkkjHk gkRkh gA

5- vkfFkd fUk,kkTkUk fUkf'PkRk Yk{,kk dh lkkflRk d fYk, &&&&&&&dk fUkn'kd gA

(B) Fill in the blanks -

(i) Interest is the price paid for the use of ..... in market.

(ii) According to Ricardo ..... land is called no rent land.

(iii) Purchasing power of money affects ..... wages.

(iv) Rolling plan started in .....

(v) Economic planning is the direction of for the achievement of objectives.

lk'Uk 2- 0kLRk f0kfUkEk,k lk.kkYkh dh lkfjHkk"kk nhfTk,\

Define Barter system of exchange?

lk'Uk 3- lkfRk EkY,k fdLk dgRk g\

What is supply price?

lk'Uk 4- ¸kkTkUkk vOkdk'k D;kk g\

Waht is plan holiday?

lk'Uk 5- Ek/;k LRkj d LkgLkCk/k Lk D;kk vk'k;k g\

What is moderate degree of correlation?

lk'Uk 6- PkRkFkd f0kPkYkUk Lk D;kk vk'k;k g\

Waht is Quartile deviation?

lk'Uk 7- MdYk lkLRkk0k D;kk g\

What is Dunkel's proposal?

lk'Uk 8- RkkYkkCkk }kjk fLkPkkb d nk nk"k fYkf[k, \

What are the demerits of irrigation by canals? (any 2)

lk'Uk 9- bLdk (ISCO) dk vFk LIk"V dhfTk, \

What is ISCO?

lk'Uk 10- Bdk YkXkkUk dLk fUk/kkfjRk gkRkk g\

HOw is contract rent determind?

lk'Uk 11- lk.k CkkTkkj ,0k vlk.k CkkTkkj Ek vRkj LIk"V dhfTk, \ ¼dkb RkhUk½

Distinguish between perfect and imperfect market. (any 3)

lk'Uk 12- jkTkL0k Lk vkfFkd f0k"kEkRkk dk nj fd;kk Tkk Lkd Rkk g] dLk \

How is economic disparity removed by public finance?

lk'Uk 13- f0kPkj.k Xk.kkd dh Xk.kUkk gRk vk0k';kd Lk«k fYkf[k;k \

Write a formula to find out coefficient of disperation.

lk'Uk 14- Pkk;k dk vkfFkd EkgR0k CkRkYkkb;k\ ¼dkb RkhUk½

Explain economic importance of tea. (any 3)

lk'Uk 15- dkXkTk m|kXk Ek[;k :lk Lk Ikf'PkEk CkXkkYk Ek D;kk dfæRk g\

Why is paper industry mostly located in West Bengal?

lk'Uk 16 djkjkIk.k d vk/kfUkd fLk)kRk D;kk g\

Waht are the modern principles of Taxation?

¼vFkok½

CkTkV dk EkgRok Lk{kIk Ek fYkf[k, \

Explain the importance of Budget in Brief.

Ik'Uk 17- LkhEkkRk mRIkknd Rkk fLk)kRk dh EkkU;kRkk, D;kk g\ ¼dkb Pkkj½

What are assumpitons of marginal productivity theory of distribution? (any 4)

¼vFkok½

jk"Vh; vk;k Ek 0kf) gRk dkb Pkkj LkÖkk0k nhfTk, \

Give 4 suggestions to increase National Income.

Ik'Uk 18- D;kk LkgLkCk/k dkj.k ,0k Ikfj.kkEk d LkCk/k dk CkRkYkkRkk g\

Does correlation tell us the relationship of cause and effect?

¼vFkok½

/kUkkREkd ,0k _.kkREkd LkgLkCk/k dk LkEkÖkkb;k\

Explain positive and negative correlation.

Ik'Uk 19- Hkkj Rk Ek vkfFkd mnkjhdj.k dh vk0k';kdRkk d dkb Pkkj dkj.k fYkf[k,

Explain any 4 reasons for the need of economic liberalization in India.

¼vFkok½

vkfFkd mnkjhdj.k d dkb Pkkj YkkHk fYkf[k, \

Write any 4 advantages of economic liberalization.

Ik'Uk 20- XkV LkEkÖkkRk d Hkkj Rk d fYk, Pkkj vUkdYk IkHkk0k fYkf[k, \

Explain the positive effects of GATT on India.

¼vFkok½

Xkj LkEkÖkkRk d Hkkj Rk d fYk, Pkkj IkfRkdYk IkHkk0k fYkf[k, \

Explain the negative effects of GATT on India.

Ik'Uk 21- LkkRk Ikdkj d fYkfIkfLVd Ek nk Ekfg Ykk vk }kjk fUkEUk Ikdkj ØEk fn;k Xk;k g&

fYkfIkfLVd	A	B	C	D	E	F	G
Ekk/kjh	2	1	4	3	5	7	6
dkEkYk	1	3	2	4	5	6	7

fL0kFkEkUk dk dkfV LkgLkCk/k Xk.kkd KkRk dhfTk,A

Following rank is given by two ladies for 7 type of lipstick -

Lipstick	A	B	C	D	E	F	G
Madhuri	2	1	4	3	5	7	6
Komal	1	3	2	4	5	6	7

Find out coefficient of correlation by spearman's method.

¼vFkZkk½

,d Lkkn¸k IkfRk¸kkfXkRkk Ek nk fUk.kk¸kdk }kjk 11 IkfRk¸kkfXk¸kk dh ØEk l fn¸k Xk¸k] dkfV LkgLkCk/k Xk.kkd fUkdkfYk¸k&

IkfRk¸kkXkh	A	B	C	D	E	F	G	H	I	J	K
fUk.kk¸kd u-–1	1	2	3	4	5	6	7	8	9	10	11
fUk.kk¸kd u-–2	2	3	1	6	4	5	8	7	10	11	9

In one competition two judges gave the ranks to 11 competants. Find out the correlation.

Competitors	A	B	C	D	E	F	G	H	I	J	K
Judge No. 1	1	2	3	4	5	6	7	8	9	10	11
Judge No. 2	2	3	1	6	4	5	8	7	10	11	9

Ik'Uk 22- fUkEUk vkdMk Lk PkRkFkd f0kPkYkUk KkRk dhfTk, &

vk¸k 0k"k Ek &	15	16	17	18	19	20	21
Nk«kk dh Lk[¸kk&	4	6	10	15	12	9	4

Calculate Quartile deviatio from the following date :

Age in year -	15	16	17	18	19	20	21
No. of Student -	4	6	10	15	12	9	4

¼vFkOkk½

Ckh-dkEk-d 10 Nk«kk d vFk'kkL«k Ek IkkIRkkd fUkEUk g&

43] 48] 65] 57] 31] 60] 37] 48] 78] 59

bUk vkdMk Lk IkEkkIk f0kPkYkUk KkRk dhfTk, A

The marks obtained by 10 students of Economics are as follows -

43, 48, 65, 57, 31, 60, 37, 48, 78, 59

Find out standard deviation from it.

Ik'Uk 23- Ik.k IkfRk¸kkfXkRkk d IkkPk RkR0kk dk LIk"V dhfTk, \

Explain the four elements of perfect competition.

¼vFkOkk½

vIk.k IkfRk¸kkfXkRkk d dkb IkkPk f0k'k"kRkk, CkRkYkkb¸k\

Explain any 5 characteristics of imperfect competitons.

Ik'Uk 24- CkM IkEkkUk d m|kXk d IkkPk YkkHk LkEkÖkkb¸k\

Explain any 5 advantages of large scale industries.

¼vFkOkk½

fHkYkkb Ek Ykkgk ,0k bLIkkRk m|kXk d LFkkUkhdj.k d IkkPk dkj.k fYkf[k, \

Give any 5 reasons for the localisation of Iron and Steel industry in Bhilai.

Ik'Uk 25- Ckgmí'kh¸k Uknh ?kkVh ¸kkTkUkk d dkb IkkPk mí'¸kk dk LkEkÖkkb¸k\

Explain any 5 objectives of multipurpose river valley projects.

¼vFkOkk½

Ckgmí'kh¸k Uknh ?kkVh ¸kkTkUkk d dkb IkkPk nk"k fYkf[k, \

Explain any 5 demeritts of multipurpose river valley projects.

Ik'Uk 26- vkfFkd fUk¸kkTkUk dh LkQYkRkk fdUk&fdUk CkkRkk Ikj fUkHkj djRkh g\ ¼dkb N½

On which factors the success of economic planning depends? Explain. (any 6)

¼vFkOkk½

IkPkOk"kh ¸kkTkUkk vk dk vf/kd IkHkkOkh CkUkkUk gRk LkÖkkOk nhfTk, \ ¼dkb N½

Give suggestions to make five year plans effective. (any 6)

Ik'Uk 27- f0kfUkEk¸k d dkb N½dkj.kk dk LIk"V dhfTk,

Explain any six causes of Exchange.

¼vFkOkk½

LkEk¸k d vk/kkj Ikj CkkTkkj fdRkUk Ikdkj d gkRk g\ Ok.kUk dhfTk, \

Classify the market on the basis of time.

lEiy mRrj lV&ch

lk'Uk 1¼v½ Lkgh f0kdYlk PkfUk, &

¼1½ ¼Ck½ 0kLRk f0kfUkEk¸k

¼2½ ¼v½ LkkXk&LkCTkh dk CkkTkkj

¼3½ ¼v½ vkfFkd f0kdkLk

¼4½ ¼v½ 28 Qj0kjh Rkd

¼5½ ¼v½ vf/kd gkRkh g

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

1- ith

2- lhekr

3- vly

4- 1 viy 1978

5- vkfFkd fØ;kvk

mRRkj 2 lkk- vYÝM Ekk'kYk & nk lk{kk d Ek/¸k gkUk 0kkYk /kUk d 0k/kkfUkd] L0kfPNd vkj lkkjLlkfjd gLRkkURkj.k dk gh f0kfUkEk¸k dgk TkkRkk gA

lkk- LVYkh Tk0kULk & dEk vk0k'¸kd 0kLRkvk Lk vf/kd vk0k'¸kd 0kLRkvk d vnYk&CknYk dk f0kfUkEk¸k dgRk gA

lkk- Lkh- vkj- Q- & f0kfUkEk¸k 0kg lkfØ¸kk g fTkLkEk fdLkh 0kLRk dk L0kkfEkR0k mfPkRk lkfRkQYk dh vk'kk Lk ,d nLkj dk gLRkkRkfjRk gkRkk gA

mRRkj 3 fjdkMk d vUkLkkj fdLkh 0kLRk dh dhEkRk mLk 0kLRk d mRlkknUk YkkXkRk vf/kd gkXkh mLkdh dhEkRk Hkh vf/kd gkXkhA vFkkRk 0kLRk dh mRlkknUk YkkXkRk 0kLRk dh dhEkRk fUk/kkfjRk djRkh g mLk lkfRk EkY¸k dgRk gA

mRRkj 4 n'k dh dUæh¸k LkRRkk }kjk ,d fUkf'PkRk mnn'¸k ¸kk dN mnn'¸kk }kjk Yk{¸k fUk/kkfjRk djd] mUk Yk{¸kk dh lkfRk gRk ¸kkTkUkk CkUkkUkk ¸kkTkUkk d fYk, Lkk/kUkk d L«kkRk <<Ukk] ¸kkTkUkk d fØ¸kkU0k¸kUk gRk fn'kk fUkn'k nUkk RkFkk ¸kkTkUkk dh LkEkkflRk lkj mLkdk EkY¸kkdUk djUkk ¸kgh ¸kkTkUkk vk¸kkXk dk dk¸k gA

mRRkj 5 TkCk nk Pkjk d Ek/¸k LkgLkCk/k dk Xk.kkd 0-5 vkj 0-75 d Ek/¸k gkRkk g Rkk ¸kg Ek/¸kEk LRkj dk LkgLkCk/k dgYkkRkk gA nLkj 'kCnk Ek Ek/¸kEk LRkj d Lkg LkCk/k d vURkXkRk LkgLkCk/k Xk.kkd 0-5 Lk vf/kd fdURk 0-75 Lk dEk gkRkk gA ¸kg LkgLkCk/k /kUkkREkd gkRkk gA

mRRkj 6 PkRkFkd f0kPkYkUk J.kh d PkRkFkd EkY¸kk Ikj vk/kkfjRk vlkfdj.k dh EkkIk gA RkRkh¸k PkRkFkd 0k IkFkEk PkRkFkd d vURkj dk vk/k&PkRkFkd f0kPkYkUk ¸kk vnËk vURkj PkRkFkd dgRk gA

Lk«k & PkRkFkd f0kPkkYkUk ¸kk $Q.D. = \frac{Q_3 - Q_1}{2}$

mRRkj 7 15 vlkYk 1994 dk 0¸kkIkkj ,0k Ik'kYd UkhfRk Ikj fTkLk (GATT) LkEkÖkkRk d UkkEk Lk TkkUkk TkkRkk g] 125 n'kk Uk gLRkk{kj fd¸k A bLk gh MdYk IkLRkk0k dgRk gA 0kRkEkkUk Ek XkV LkEkÖkkRk dk Uk¸kk UkkEk f0k'0k 0¸kkIkkj LkXkBUk gA

mRRkj 8 RkkYkkCk }kjk fLkPkkb Lk fUkEUkfYkf[kRk nk"k g %&

1- fLkPkkb Ek dfBUkkb & RkkYkkCk Lk [kRkk Rkd IkkUkh Yk TkkUk Ek dkQh JEk ,0k LkEk¸k YkXkRkk gA 0kLk vCk Ikkblk 0k fCkTkYkh dh Lkgk¸kRkk Lk JEk ,0k LkEk¸k dEk gk Xk¸kk gA

2- TkYnh mFkYkk gkUkk & RkkYkkCkk Ek IkfRk0k"k TkYk d LkkFk fEkVVh] jRk vkfn Ckgdj 0kgk TkEkk gk TkkRkh gA vRkh RkkYkkCk mFkYkk gk TkkRkk gA vRk,0k dN 0k"kk Ckkn [knkb djkUkk vk0k'¸kd gk TkkRkk gA

mRRkj 9 bLdk **bfM¸kUk vk¸kjUk ,.M LVhYk dEIkUkh (INDIAN IRON AND STEEL COMPANY)^^ bLkdh LFkkIkUkk LkUk 1981 Ek ghjkIkj ¼vkLkUkLkkYk d IkkLk½ CkXkkYk Ek gbA

mRRkj 10 Bdk ¸kk IkLkf0knk YkXkkUk HkfEk dh EkkXk 0k IkfRk dh LkkIkf{kd 'kfDRk¸kk }kjk fUk/kkfjRk gkRkk g RkFkk ¸kg vkfFkd YkXkkUk d CkjkCkj] dEk ¸kk vf/kd gk Lkd Rkk gA Tkk /kUk ,d Ñ"kd fdLkh HkfEk d Ik¸kkXk d Ckny Ek Hk&L0kkEkh dk LkEk¸k&LkEk¸k Ikj nUk dk vUkCk/k djRkk g mLk IkLkf0knk YkXkkUk ¸kk Bdk YkXkkUk dgRk gA

mRRkj 11 Ik.k CkkTkkj ,Ok vlk.k CkkTkkj Ek vRkj&

Ik.k CkkTkkj	vlk.k CkkTkkj
1- bLkEk ØRkkvk RkFkk f0kØRkkvk nkUkk dh f0kØRkkvk dh Lk[;kk vf/kd gkRkh gA	1- ,Lk CkkTkkj Ek ØRkkvk RkFkk vlk{kkÑRk dEk gkRkh gA
2- ØRkkvk RkFkk f0kØRkkvk dk CkkTkkj dk Ik.k KkUk jgRkk gA	2- ØRkkvk RkFkk f0kØRkkvk dk CkkTkkj dk Ik.k KkUk Ukgh gkRkk gA
3- Lkeku oLrvk dh dher leku gkrh gA	3- oLrvk dh dher vleku gkrh g

mRRkj 12 jkTkL0k Lk Lkjdkj] vEkhj&Xkjhck dh Xkgjh [kkb dk IkkVUk dk Ik;kRUk djRkh gA ,d TkUkdY;kk.kdkjh Lkjdkj] jkTkL0k }kjk n'k dh vkfFkd f0k"kEkRkk nj dj LkdRkh gA

mRRkj 13 f0kPkj.k Xk.kkd] IkEkkIk f0kPkYkUk Xk.kkd dk IkfRk'kRk d :Ik Ek EkkIk gkRkk gA bLk KkRk djUk d fYk, IkEkkIk&f0kPkYkUk dk J.kh d LkEkkURkj Ekk/;k Lk HkkXk ndj HkTkUkQYk dk 100 Lk Xk.kk fd;kk TkkRkk gA

f0kPkj.k Xk.kkd fUkdkYkUk dk Lk«k $\text{C.V.} = \frac{S}{X} \times 100$

mRRkj 14

1- Pkk;k d mIk;kkXk & bLkdk mIk;kkXk LkHkh _Rkvk Ek RkFkk LkHkh {k««kk Ek fd;kk TkkUk YkXkk gA

2- jkTkXkkj dh IkkfIRk & Pkk;k dh [kRkh Ek IkfRRk;kk Lkk/kkj.kRkh gkFkk Lk PkUkh TkkRkh gA

3- f0kn'kh Ekæk dh IkkfIRk & HkkjRk f0k'Ok Ek IkEk[k Pkk;k mRIkknd ,Ok fUk;kkRkd n'k gA Pkk;k dk Ekæknk;kUkh ÅIkTk EkkUkk TkkRkk gA

mRRkj 15 Ikf'PkEk CkXkkYk dk dkXkTk mRIkknUk Ek n'k Ek IkgYkk LFkkUk IkkIRk gA ;kgk dkXkTk d 14 0kgn dkj[kkUk g Tkk YkXkkHkXk n'k dk vk/kk dkXkTk Rk;kkj djRk gA VhVkXk< jkUkhXkTk] UkgkVh] f«k0k.kh] vkYkkEk CkkTkkj] dkdhUkkjk RkFkk f'k0jkQYkh bLk jkT;k d dkXkTk m|kXk d IkEk[k dUæ gA

mRRkj 16 LkhEkkURk mRIkkndRkk fLk)kRk dh IkEk[k EkkU¸kRkk fUkEUk Ikdkj g &

1- mRIkknUk Ek Ik¸kDRk Lkk/kUk dh LkEkLRk bdkb¸kk LkEkkUk jgRkh gA

2- ,d Lkk/kUk d CknYk nLkj Lkk/kUk dk IkfRkLFkkIkUk fd¸kk Tkk LkdRkk gA

3- mRIkknUk d Lkk/kUk Ik.k XkfRk'khYk gkRk gA

4- ¸kg fLk)kRk nh?kdkYk Ek YkkXk gkRkk gA

5- ¸kg fLk)kRk LkhEkkURk mRIkfRRk gkLk fUk¸kEk Ikj vk/kkfjRk gkRk gA

¼vFkOkk½

Hkkj Rk Ek jk"Vh¸k vk¸k dh Okf) gRk LkÖkkOk &

1- /kUk dk LkEkkUk fOkRkj.k

2- IkkÑfRkd Lkk/kUkk dk mfPkRk mIk¸kkXk

3- Ckdk dk fOkdkLk

4- IkTkh fUkEkk.k dh nj Ek Okf)

5- Ñf"k dk mfPkRk fOkdkLk

6- EkgXkkb Ikj jkd

mRRkj 17 OkRkEkkUk dj Ik.kkYkh vf/kd ØEkCk) ,Ok OkKkfUkd Ik.k gk Xk¸kh vkj djk dk vk¸k dk IkEk[k Lkk/kUk EkkUkk TkkRkk gA IkkPkhUkdkYk Ek dOkYk LkkOkTkfUkd O¸k¸k dh IkfRk gRk ghdj YkXkk¸k TkkRk Fk] fdURk vk/kfUkd LkEk¸k Ek vk¸k dh EkkXk fnUk&IkfRkfnUk jkT¸kk }kjk Ck<Rkh Tkk jgh g OkRkfYk, fdLkh Hkh ,d dj Lk bLk Ck<Rkh gb EkkXk dh IkfRk Ukgh dh Tkk LkdRkh g bLkfYk, Lkjdkj fOkfHkUUk mnn'¸kk dh IkfRk d fYk, dj YkXkkRkh gA

Ikk- ,MEk fLEkFk d Ckkn d vFk'kkfL«k¸kk Uk dN vU¸k fLk)kRkk dk IkfRkIkknUk fd¸kk g] fTkUg dj d vk/kfUkd fLk)kRk dgk TkkRkk gA ¸k fLk)kRk fUkEUkfYkf[kRk g &

1- mRIkkndRkk dk fLk)kRk

2- YkkPk dk fLk)kRk

3- LkjYkRkk dk fLk)kRk

4- f0kf0k/kRkk dk fLk)kRk

5- vkfPkR;k dk fLk)kRk

¼vFkZkk½

CkTkV dk EkgRZk &

1- CkTkV ,d 0k"k d fYk, vk;k&0;k;k dk f0k0kj.k gkRkk gA

2- CkTkV dk fUkEkk.k ,0k mLkd fUk;k«k.k dk dk;k TkfVYk gkRkk gA

3- CkTkV HkkZkh lkfjfLFkfRk;kk d vUkLkkj lkfj0kRkUk'khYk Uk gkUk lkj gkfUk dh vk'kdk jgRkh gA

4- CkTkV Ykkd LkHkk ;kk f0k/kkUkLkHkk Ek lkLRkRk djUk d lk0k XkIRk j[kk TkkRkk gA

5- CkTkV ,d PkUkkRkh lk.k dk;k djRkk gA

mRRkj 18 LkgLkCk/k f0k'Yk"k.k nk ;kk vf/kd Pkjk d CkhPk LkCk/k dh fn'kk ,0k Ekk«kk dk CkRkYkkRkk gA ;kg dkj.k ,0k lkfj.kkEk d CkhPk LkCk/k d f0k"k;k Ek dN Hkh Ukgh CkRkYkkRkk gA 0kkLRk0k Ek LkgLkCk/k f0k'Yk"k.k nk Pkjk Ek ;kg f0kPkj.k dk CkRkYkkRkk gA vFkkRk ,d Pkj Ek lkfj0kRkUk gkUk lkj nLkj Pkj Ek fdLk fn'kk Ek RkFkk fdRkUkh Ekk«kk Ek lkfj0kRkUk gkRkk g ;kg Lk"V djRkk gA bLkdk dkj.k ,0k lkfj.kkEk d CkhPk LkCk/kk dh 0;kk[;kk Ukgh djRkk gA

¼vFkZkk½

/kUkkREkd LkgLkCk/k & TkCk nk Pkjk Ek ,d fn'kk Ek lkfj0kRkUk gkRkk g Rkk mUk Pkjk d CkhPk LkgLkCk/k /kUkkREkd dgYkkRkk gA mnk- & 0kLRk d EkY;k Ek 0kf) gkUk lkj mLkdh lkfRk Ek Hkh 0kf) gkUkk] nkUkk d CkhPk /kUkkREkd LkgLkCk/k dk CkRkYkkRkk gA

/kUkkREkd LkgLkCk/k

0kLRk dk EkY;k ¼lkfRk b- #- Ek½	10	20	30	40	50
0kLRk dh lkfRk ¼bdkb Ek½	100	120	150	180	250

bLkd f0klkjhRk TkCk nk Pkjk Ek lkfj0kRkUk f0klkjhRk fn'kk Ek gkRkk g vFkkRk ,d Pkj d EkY;k Ek 0kf) gkUk lkj nLkj Pkj Ek EkY;k Ek dh gkRkh g] Rkk mUkd CkhPk LkgLkCk/k _.kkREkd gkRkk gA

_.kkREkd LkgLkCk/k

0kLRk dk EkY;k ¼Ikf/Rk b- #- Ek½ 10 20 30 40 50

0kLRk dh Ikf/Rk ¼bdkb Ek½ 100 80 60 30 20

mIk;kDRk RkkfYkdk Ek EkY;k 0k Ikf/Rk dk Ck<Ukk /kUkkREkd LkgLkCk/k g RkFkk EkY;k Ck<Uk Ikj EkkXk dEk gkUkk _.kkREkd LkgLkCk/k n'kkRkk gA

mRRkj 19

x series	Rank (x)	y series	Rank (y)	Difference of rank (x – y)	Square of rank d2
2	6	1	7	–1	1
1	7	3	5	2	4
4	4	2	6	–2	4
3	5	4	4	1	1
5	3	5	3	0	0
7	1	6	2	–1	1
6	2	7	1	1	1
$N = 7$		$N = 7$			$\sum d^2 = 12$

$$r = 1 - \frac{6 \times \sum d^2}{N^3 - N}$$

Tkgk r = fLIk;kjEkUk dk dkfV vRkj Lkg LkCk/k Xk.kkd

$\sum d^2$ = ¼nkUkk Jf.k;kk d ØEkk Ek vRkj dk ;kXk½

N = ¼Iknk dh Lk[;k½

vRkh EkkUk j[kUk Ikj

$$r = 1 - \frac{6 \times 12}{7^3 - 7}$$

$$r = 1 - \frac{72}{343 - 7}$$

$$r = 1 - \frac{72}{336}$$

$$r = \frac{264}{336}$$

$$r = 0.7857$$

¼vFkZkk½

mRRkj 20 HkkjRk Ek vkfFkd mnkjhdj.k dh vkZk'¸kdRkk d vUkd dkj.k g ¼&

1- jkTkXkkj Ldyk

2- CkTkV ?kkV Ek fUkjURkj 0kf)

3- Ekæk LQhfRk Ek 0kf)

4- IkfRkdYk HkXkRkkUk LkRkYkUk

5- f0kfUk¸kkXk <kPk Ikj IkfRkdYk IkHkk0k

6- f0kn'kh _.kk dk Ck<Rkk CkkÖk

7- [kkMh Lkdv

¼vFkZkk½

mnkjhdj.k d YkkHk &

1- vkfFkd mnkjhdj.k Lk HkkjRk dk vkfFkd Lkdv dkQh LkhEkk Rkd dEk gk Xk¸kk g ,Zk f0kn'kh f0kfUk¸kkXk dh LkhEkk Ck<kUk Lk f0kn'kh Ekæk dk"k Ek dkQh 0kf) gbA

2- LkkZkTkfUkd {k«k d fUkTkhdj.k dk IkkRLkkgUk fEkYkkA bLkLk nk YkkHk g,] IkgYkk Lkjdkj dk Ik¸kkIRk /kUk jkf'k fEkYkh vkj fUkTkh gkFkk Ek LkPkkYkUk 0¸kZkLFkk TkkUk Lk d'kYkRkk Ek 0kf) gbA

3- bULIkDVj jkTk LkEkkIRk djUk] Ykk¸kLkLk YkUk dh vfUkZkk¸kRkk LkEkkIRk djUk Lk m|kXk Ek dkQh Lk/kkj gvk g RkFkk fj'kZkRk[kkjh 0k Hk"VkPkkj Ek dkQh dEkh vk¸kh gA

4- Hkkjrk Ek LkUk 1991 Lk Ykdj vkTk Rkd YkXkkRkkj f0kn'kh lkTkh fUk0k'k lkTkh fUk0k'k Ek 0kf) gk jgh gA vFk0¸k0kLFkk d LkHkh {k«kk Ek vlkUkk ¸kkXknkUk nUk d fYk, f0kn'kk Lk Lkdlk lkLRkk0k lkklRk g, gA

mRRkj 21 XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj vUkdYk lkHkk0k fUkEUk g %&

1- XkV LkEkÖkkRk Lk Hkkjrk d fUk¸kkRk Ek Hkkjh 0kf) dh LkEHkk0kUkk, gA

2- f0kn'kh lkfRk¸kkfXkRkk d dkj.k Hkkjrkh¸k EkkYk dh Xk.k0kRRkk Ek dkQh Lk/kkj gkXkkA

3- lkkÑfRkd :lk Lk lknk gkUk 0kkYkh 0kLRkvk d lkVUV dh vk0k'¸kdRkk Ukgh lkMXkhA

4- f0kn'kh lkTkh fUk0k'k Ek 0kf) gkXkh] fTkLkLk Hkkjrk d vkfFkd Lk/kkj dk¸kØEk Ek RkTkh vk¸kXkhA

¼vFk0kk½

XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj lkfRkdYk lkHkk0k fUkEUk g %&

1- LkhfEkRk Lkk/kUkk d dkj.k Hkkjrkh¸k dElkfUk¸kk Ckgjk"Vh¸k dElkfUk¸kk dh lkfRkLlk/kk Ek fVd Ukgh Lkdlk XkhA

2- Hkkjrk Ek dN n0kkb¸kk d EkY¸k Ek CkRkgk'kk 0kf) gkXkh] ¸kg EkY¸k 0kf) 40 Lk 100 lkfRk'kRk gk Lkdlkh gA

3- Hkkjrk dh LkEkPkh Lk0kk 0k mRlkknd Rkk 0¸k0kLFkk lkj dN f0kn'kh dElkfUk¸kk dk gLRk{klk gk Tkk,Xkk fTkLkLk Hkkjrk dk Ukdlkk Uk gkXkkA

4- vk¸kkfRkRk 0kLRkvk lkj YkXkUk 0kkYk 'kYdk lkj Hkkjh dVkRkh djUkh lkMXkhA

mRRkj 22 lk.k lkfRk¸kkfXkRkk d lkkPk RkR0k fUkEUk g %&

1- ØRkk ,0k f0kØRkkvk dh vf/kd Lk[¸kk

2- mRlkknUk Ek ,d :lkRkk

3- CkkTkkj dh n'kkvk dk lk.k KkUk

4- lkfj0kgUk YkkXkRk dk vHkk0k

¼vFk0kk½

vlk.k lkfRk¸kkfXkRkk d lkkPk f0k'k"kRkk, fUkEUk g %&

1- ØRkk&f0kØRkkvk dh Lk[¸kk LkhfEkRk

2- CkkTkkj dk Ik.k KkUk Ukgh

3- 0kLRkvk Ek ,d :IkRkk Ukgh

4- Ik.k XkfRk'khYkRkk dk vHkk0k

5- IkfRk¸kkfXkRkk dk vHkk0k

6- Ikfj0kgUk dh ÅPkh YkkXkRk

7- EkY¸kk Ek vRkj

8- f0kKkIkUk

mRRkj 23

vk¸k Ok"kk Ek (M)	vk0kfRRk (f)	LkPk¸kh vk0kfRRk (c.f.)
15	4	4
16	6	10
17	10	20
18	15	35
19	12	47
20	9	56
21	4	60

Q_1 = size of $\left(\frac{N+1}{4}\right)^{th}$ item

Q_1 = size of $\left(\frac{60+1}{4}\right)$item

¸kg C.F. 20 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 17 gh Q_1 g A

Q_3 = size of $3\left(\frac{N+1}{4}\right)^{th}$ item

Q_3 = size of $3\left(\frac{60+1}{4}\right)$item

¸kg C.F. 47 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 19 gh Q_3 g A

PkRkFkd f0kPkYkUk Q.D = $\frac{Q_3 - Q_2}{2} = \frac{19-17}{2} = \frac{2}{2} = 1 years$

PkRkFkd f0kPkYkUk Xk.kkd (Coefficient of Q.D.)

$$= \frac{Q_3 - Q_1}{Q_3 + Q_2} = \frac{19-17}{19+17} = \frac{2}{36} = 0.0555$$

¼vFkOkk½

ØEkkd	lkn EkY;k x	dfYIkRk Ekk/;k Lk f0kPkYkUk dx(A= 60)	f0kPkYkUkk dk 0kXk dx^2
1.	43	–17	289
2.	48	–12	289
3.	65	5	144
4.	57	–3	9
5.	31	29	841
6.	60	0	0
7.	37	–23	529
8.	48	–12	144
9.	78	18	324
10.	59	–1	1
N =10	$\sum x$ =526	$\sum dx$ =–74	$\sum dx^2$ =2306

LkkEkkURkj Ekk/;k dh Xk.kUkk%&

$$\bar{X} = \frac{\sum x}{N} = \frac{526}{10} = 52.6$$

Tkgk lkj $\bar{X}$ = LkEkkURkj Ekk/;k

$\sum x$ = lkn EkY;kk dk ;kkXk

N = lknk dh Lk[;kk

lkEkkIk f0kPkYkUk dh Xk.kUkk %&

$$\sigma = \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

$$\sigma = \sqrt{\frac{2306}{10} - \left(\frac{-74}{10}\right)^2}$$

$$\sigma = \sqrt{230.6 - (-7.4)^2}$$

$$\sigma = \sqrt{230.6 - 54.76}$$

$$\sigma = \sqrt{175.84}$$

$$\sigma = 13.26$$

Tkgk σ = IkEkkIk f0kPkYkUk

$\sum dx$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk dk ¸kkXk

$\sum dx^2$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk d 0kXkk dk ¸kkXk

N = Iknk dh Lk[¸kk

mRRkj 24 Ckgnn'¸kh Uknh ?kkVh ¸kkTkUkkvk d mnn'¸k ¼EkgR0k½ ¸kk YkkHk vXkfYkf[kRk g &

1- fLkPkkb Lkf0k/kk & Uknh ?kkVh ¸kkTkUkkvk dk IkEk[k mnn'¸k fLkPkkb g A dh vk0k'¸kdRkk dk n[kRk g, ¸k ¸kkTkUkk, CkUkkb Xkb gA

2- Ik¸kVUk LFkYkk dk fUkEkk.k & Ukfn¸kk d ?kkfV¸kk Ek Ckk/k LkEkhIk m|kUk ,0k mIk0kUk

3- EkRL¸k IkkYkUk m|kXk & bUk ¸kkTkUkkvk Ek CkM&CkM TkYkk'k¸kk dk fUkEkk.k gkRkk g] fTkUkEk EkRL¸k IkkYkUk m|kXk dk vkLkkUkh Lk dk¸kkfU0kRk fd¸kk Tkk Lkdkk gA

4- HkfEk dVk0k Ikj jkd & bUk ¸kkTkUkkvk d f0kdkLk Lk RkTk CkgUk 0kkYkh Ukfn¸kk dh XkfRk /khEkh gk TkkRkh g vkj Ckk< fUk¸kf«kRk gk TkkRkk gA

¼vFk0kk½

Ckgnn'kh¸k Uknh ?kkVh ¸kkTkUkk d N% nk"k g

1- db Xkk0kk dk MCk TkkUkk

2- mIkTkkÅ [kRkk dk Ckdkj gk TkkUkk

3- Ukgjk Ek vPkUkkd IkkUkh NkMUk Lk fUkPkYk fgLLk Ek gkfUk

4- CkhEkkfj¸kk dk Ikdkik

5- vdkYk EkR¸k

6- vlkR;k{k 0;k;k

mRRkj 25 HkkjRk Ek CkM IkEkkUk d m|kXkk Lk vUkd YkkHk gkRk g] fTkUkEk fUkEUkfYkf[kRk f0k'k"k mYYk[kUkh;k g %&

1- jk"Vh;k vk;k Ek 0kf) & CkM IkEkkUk d m|kXkk d f0kdkLk Lk jk"Vh;k vk;k Ek 0kf) dh Tkk Lkd Rkh gA

2- jkTkXkkj Ek 0kf) & CkM IkEkkUk d m|kXkk dk EkkYk LkLRkk gkRkk g vRkh CkkTkkj Ek EkkXk vf/kd gkRkh gA vf/kd EkkXk dk Ikjh djUk d fYk, m|kXkk dk f0kLRkkj fd;kk TkkRkk gA

3- LkURkfYkRk f0kdkLk & fdLkh n'k d vkfFkd <kPk Ek Lk/kkj ,0k LkURkfYkRk f0kdkLk vk0k';kd gkRkk gA

4- f0kn'kh IkTkh vkdf"kRk & CkM IkEkkUk d m|kXkk dk LkfUk;kkfTkRk f0kdkLk] f0kn'kh f0kfUk;kkDRkkvk dk Hkh vkdf"kRk djRkk gA

5-

¼vFk0kk½

1- dPPkk EkkYk & Ykkgk bLIkkRk m|kXk dk dPPk EkkYk dh IkkfIRk LkCkLk vf/kd IkHkkf0kRk djRkh g] fHkYkkb d fUkdV 32 fdEkh- nj nYYkh&jkTkgjk EkkXk Ek Ykkg v;kLd Ikk;kk TkkUkk bLkd dUæh;kdj.k dk Ek[;k dkj.k gA

2- dk;kYkk ,0k f0k|Rk 'kfDRk & mLk m|kXk d fYk, dk;kYkk Ökfj;kk RkFkk dkjCkk Lk gkRkh g] Tkk fd fHkYkkb d fUkdV gA

3- TkYk IkfRk & fHkYkkb Lk;k«k dk TkYk vkIkfRk RkkUnYkk Ukgj d Tkfj;k] XkXkjYk MEk Lk gkRkk g Tkk bLk LFkkUk Lk UkTknhd gA

4- jYkEkkXk dh Lkf0k/kk & fHkYkkb bLIkkRk Lk;k«k dk EkECkb gk0kMk jYkEkkXk dh Lkf0k/kk IkkIRk g bLkd vfRkfjDRk LkMd EkkXk jk"Vh;k jkTkEkkXk ØEkkd 6 Lk TkMk gA

5- f0kn'kh Rkd Ukhdh & bLk m|kXk d LFkkUkh;kdj.k Ek Lkkf0k;kRk Lk?k ¼Ik0k Ek½ dh Rkd Ukhdh ,0k f0kRRkh;k Lkgk;kRkk IkkIRk gvk gA

mRRkj 26 f0kfUkEk;k d N% dkj.k fUkEUkfYkf[kRk g &

1- nkUkk lk{kk dk YkkHk

2- nk jk"Vk dk YkkHk

3- vk0k'¸kd 0kLRkvk dh lkkfIRk

4- JEk f0kHkkTkUk Lk YkkHk

5- CkkTkkj dk f0kLRkkj

6- lkkÑfRkd Lkk/kUkk dk vf/kdRkEk mlk¸kkXk

7- Tkh0kUk LRkj ÅPkk gkXkkA

8- vURkjk"Vh¸k mUUkfRk Ek Lkgk¸kd

9- vk|kfXkd mUUkfRk Ek Lkgk¸kd

10- LkdV d LkEk¸k Lkgk¸kd

¼vFk0kk½

LkEk¸k d vk/kkj lkj CkkTkkj Pkkj lkdkj d gkRk g &

1- vfRk vYlkdkYkhUk ¸kk nfUkd CkkTkkj & bLk lkdkj d CkkTkkj Ek 0kLRk dh lkfRk fUkf'PkRk jgRkh g bLkEk dkb lkfj0kRkUk Ukgh fd¸kk Tkk LkdRkk vRkh EkkXk d dkEk gkUk lkj EkY¸k Ek dEkh RkFkk EkkXk d Ck<Uk lkj EkY¸k Ek 0kf) gkRkh gA

2- vYlkdkYkhUk CkkTkkj & vYlkdkYkhUk CkkTkkj 0kg g fTkLkEk 0kRkEkkUk Lkk/kUkk dh Lkgk¸kRkk Lk FkkMk CkgRk mRlkknUk ?kVk¸kk ¸kk Ck<k¸kk Tkk LkdRkk gA

3- nh?kdkYkhUk CkkTkkj & fTkLk v0kf/k Ek fdLkh 0kLRk dh lkfRk Ek EkkXk d vUkLkkj lkfj0kRkUk dk lk¸kkIRk v0kLkj jgRkk g] mLk v0kf/k d CkkTkkj dk nh?kdkYkhUk CkkTkkj dgRk gA

4- vfRk nh?kdkYkhUk CkkTkkj & vfRk nh?kdkYkhUk CkkTkkj dk LkCk/k bRkUkh YkCkh v0kf/k Lk jgRkk g fTkLkd vURkXkRk mlkHkkDRkk dh :fPk] Q'kUk ,0k L0kHkk0k vkfnA

mRRkj 27 vkfFkd fUk¸kkTkUk dh LkQYkRkk dh fUkEUk CkkRk g &

1- Yk{¸kk dk fUk/kkj.k

2- ¸kkTkUkk dh n'kk

3- fUkf'PkRk v0kf/k

4- lkkFkfEkdRkk

5- fUk¸k«k.k

6- LkEkU0k¸k

7- vU¸k

¼vFk0kk½

lkPk0k"kh¸k ¸kkTkUkkvk dk vf/kd lkHkkk0kh CkUkkUk gRk LkÖkk0k &

1- ¸kkTkUkk, vfRk f0k'kkYk ,0k vfRk EkgR0kkdk{kh Uk gkA

2- lkkFkfEkdRkk dk fUk/kkj.k jk"V d vUkdYk gkA

3- f0kn'kh Lkgk¸kRkk ,0k _.k lkj fUkHkjRkk LkEkkIRk gk

4- ¸kkTkUkk dk fUkEkk.k lkEkkf.kRk TkkUkdkfj¸kk d vk/kkj lkj gk

5- Hk"VkPkkj RkFkk /kUk d n#Ik¸kkXk lkj dBkj fUk¸k«k.k

6- fUk¸kkRk Lk0k/kUk lkj f0k'k"k CkYk

Set -C

gk;j ld.Mjh Ldy lVhfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; %& (Subject) - 0;k- vFk'kkL= **le; 3 ?k.Vk (Time- 3 Hrs)**

d{kk %& (Class) -12oh **i.kkd 100 (M.M.)**

(Instruction) & ¼fun'k½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vd fu/kkfjr g A nk dky[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vd vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 09 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 09 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 10 l i'u Øekd 15 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 10 to 15 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 16 l i'u Øekd 21 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 16 to 21 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- iz'u Øekad 22 ls iz'u Øekad 25 rd nh?kZmRrjh; iz'u gS A izR;s
vkarfjd fodYi gS vkSj izR;sd iz'u ij 05 vad vkcafVr gS A mRrj dh vf/
'kCn lhek 100 'kCn A

Q. No. 22 to 25 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- iz'u Øekad 26 ls iz'u Øekad 27 rd nh?kZmRrjh; iz'u gS A izR;s
vkarfjd fodYi gS vkSj izR;sd iz'u ij 06 vad vkcafVr gS A mRrj dh vf/
'kCn lhek 150 'kCn A

Q. No. 26 to 27 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

Ik'Uk 1¼v½ Lkgh f0kdYIk PkfUk, &

¼1½ nkgj Lk¸kkXk dk vHkk0k nk"k g &

¼v½ 0kLRk f0kfUkEk¸k dk ¼Ck½ vIkR¸k{k f0kfUkEk¸k dk

¼l½ Ekæk f0kfUkEk¸k dk ¼n½ bUkEk Lk dkb UkghA

¼2½ TkCk fdLkh 0kLRk d f0kØRkk ,0k IkkRk Rkd QYk gkRk g] 0kg g&

¼v½ jk"Vh¸k CkkTkkj ¼Ck½ Ikknf'kd CkkTkkj

¼l½ vURkjk"Vh¸k CkkTkkj ¼n½ LFkkUkh¸k CkkTkkj

¼3½ jkTkL0k Ek v/¸k¸kUk fd¸kk TkkRkk g&

¼Ck½ Lkk0kTkfUkd 0¸k¸k ,0k Lkk0kTkfUkd vk¸k dk ¼Ck½ Lkk0kTkfUkd _.k dk

¼Ck½ f0k/kh¸k Ik'kkLkUk dk 4- mIk¸kDRk LkHkh dk A

¼4½ djkjkIk.k d LkEkkUkRkk d fLk)kRk d IkfRkIkknd g&

¼v½ Ikk- ,MEk fLEkFk ¼Ck½ Ikk- CkLVCkYk

¼l½ Ikk- LkfYkXkEkUk ¼n½ Ikk- MkYVUk A

¼5½ bLk dj dk djk?kkRk ,0k djkIkkRk nkUkk ,d gh 0¸kfDRk Ikj IkMRkk g&

¼v½ vIkR¸k{k dj ¼Ck½ IkR¸k{k dj Ek

¼l½ IkR¸k{k ,0k vIkR¸k{k dj nkUkk Ek ¼n½ bUkEk Lk dkb Ukgh A

Que 1 (A) Choose the correct alternative -

(i) Lack of double coincidence is a demerit of -

(a) Barter suste, (b) Indirect exchange

(c) Money exchange (d) None of the above

(ii) When a commodity is traded countrywide, it has a -

(a) National market (b) Local market

(c) Internation market (d) Provincial market

(iii) In public finance we study -

(a) Public income and expenditure (b) Public debt.

(c) Financial administration. (d) All of the above

(iv) The principle of equality of taxation was given by -

(a) Prof. Adam smith (b) Prof. Baostball

(c) Prof. Salignan (d) Prof. Dalton

(v) Name the tax in which the impact of the tax and incidence of tax is on the same person -

(a) Indirect tax (b) Direct tax

(c) Both (d) None of the above.

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

¼1½ &&&&&&&&HkfEk d mlk¸kkXk d CknYk fn¸kk TkkUk 0kkYkk EkY¸k gA

¼2½ lkTkh dh XkfRk'khYkRkk &&&&&&&&dh nj Ek fHkUUkRkk dk ,d dkj.k gA

¼3½ &&&&&&YkXkkUk HkfEk dk NkMdj vU¸k LkHkh Lkk/kUkk Lk lkkIRk gkRkk gA

¼4½ jk"Vh¸k f0kdkLk lkfj"kn dk XkBUk &&&&&&&dk gvk A

¼5½ vkfFkd fUk¸kkTkUk ,d &&&&&&&lkfØ¸kk g fTkLkEk ,d d Ckkn ,d vUkd ¸kkTkUkk, fUkjRkj PkYkRkh jgRkh gA

(B) Fill in the blanks -

(i) ..... is the price paid for the use of land.

(ii) Mobility of capital is due to difference in the rate of .....

(iii) ..... rent is received from other thing & except land.

(iv) National development council was established in the year .....

(v) Planning is a ..... process in which planning is done one after the other.

lk'Uk 2- 0kLRk f0kfUkEk¸k Lk D¸kk vk'k¸k g\

What is menat by Barter system of exchange?

lk'Uk 3- EkkXk EkY¸k fdLk dgRk g\

Waht is demand price?

lk'Uk 4- vUk0kjRk ¸kkTkUkk D¸kk g\

What is Rolling plan?

lk'Uk 5- fUkEUk LRkj d Lkg LkCk/k Lk D;kk vk'k;k g\

What is meant by low degree correlation?

lk'Uk 6- Ekk/;k f0kPkYkUk Lk D;kk vk'k;k g\

What is mean deviation?

lk'Uk 7- XkV GATT LkEkÖkkRk lkj dCk gLRkk{kj fd, Xk;k\

When was GATT agreement signed?

lk'Uk 8- dvk }kjk fLkPkkb d nk nk"k fYkf[k,\

Write two demerits of irrigation by wells.

lk'Uk 9- fEkLdk (MISCO) dk vFk LIk"V dhfTk, \

Explain the meaning of MISCO.

lk'Uk 10- YkXkkUk fdLk lkdkj fUk/kkfjRk fd;kk TkkRkk g\

How is rent determined?

lk'Uk 11- CkkTkkj EkY;k RkFkk LkkEkkU;k EkY;k Ek vRkj fYkf[k, ¼dkb RkhUk½

Distinguish between market price and normal price (Any 3)

lk'Uk 12- jkTkLOk }kjk vkfFkd fLFkjRkk fdLk lkdkj LFkkfIkRk dh Tkk Lkd Rkh g\

How is economic stability established through Public Finance?

lk'Uk 13- lkEkkIk f0kPkYkUk dh Xk.kUkk gRk vk0k';kd Lkkk fYkf[k, \

Write the formulas for calculating Standard deviation.

lk'Uk 14- Lkk;kkCkhUk d EkgR0k lkj ,d fVIIk.kh fYkf[k, \

Wirte a short note as importance of Soyabean.

lk'Uk 15- vgEknkCkkn Hkkj Rk dk EkUkPkLVj g\ 0;kk[;kk dhfTk, \

'Ahmedabad is the Manchester of India'. Explain.

lk'Uk 16- D;kk LkgLkCk/k dkj.k ,0k lkfj.kkEk d LkCk/k dk CkRkYkkRkk g\

Does correlation tell us the relationship of cause and effect?

¼vFk0kk½

/kUkkREkd ,0k _.kkREkd LkgLkCk/k dk LkEkÖkkb,k\

Explain positive and negative correlation.

Ik'Uk 17 djkjkIk.k d vk/kfUkd fLk)kRk D,kk g\

Waht are the modern principles of Taxation?

¼vFkOkk½

CkTkV dk EkgROk Lk{kIk Ek fYkf[k, \

Explain the importance of Budget in Brief.

Ik'Uk 18- LkhEkkRk mRIkkndRkk fLk)kRk dh EkkU,kRkk, D,kk g\ ¼dkb Pkkj½

What are assumpitons of marginal productivity theory of distribution? (any 4)

¼vFkOkk½

jk"Vh,k vk,k Ek 0kf) gRk dkb Pkkj LkÖkkOk nhfTk, \

Give 4 suggestions to increase National Income.

Ik'Uk 19- XkV LkEkÖkkRk d Hkkjrk d fYk, Pkkj vUkdYk IkHkkOk fYkf[k, \

Explain the positive effects of GATT on India.

¼vFkOkk½

Xkj LkEkÖkkRk d Hkkjrk d fYk, Pkkj IkfRkdYk IkHkkOk fYkf[k, \

Explain the negative effects of GATT on India.

Ik'Uk 20- Hkkjrk Ek vkfFkd mnkjhdj.k dh vk0k',kdRkk d dkb Pkkj dkj.k fYkf[k,

Explain any 4 reasons for the need of economic liberalization in India.

¼vFkOkk½

vkfFkd mnkjhdj.k d dkb Pkkj YkkHk fYkf[k, \

Write any 4 advantages of economic liberalization.

Ik'Uk 21- LkkRk Ikdkj d fYkfIkfLVd Ek nk EkfgYkkvk }kjk fUkEUk Ikdkj ØEk fn,k Xk,k g&

fYkfIkfLVd	A	B	C	D	E	F	G
Ekk/kjh	2	1	4	3	5	7	6

dkEkYk 1 3 2 4 5 6 7

fL0kFkEkUk dk dkfV LkgLkCk/k Xk.kk d KkRk dhfTk,A

Following rank is given by two ladies for 7 type of lipstick -

Lipstick	A	B	C	D	E	F	G
Madhuri	2	1	4	3	5	7	6
Komal	1	3	2	4	5	6	7

Find out coefficient of correlation by spearman's method.

¼vFkOkk½

,d Lkkn¸k IkfRk¸kkfXkRkk Ek nk fUk.kk¸kdk }kjk 11 IkfRk¸kkfXk¸kk dh ØEk l fn¸k Xk¸k] dkfV LkgLkCk/k Xk.kk d fUkdkfYk¸k&

IkfRk¸kkXkh	A	B	C	D	E	F	G	H	I	J	K
fUk.kk¸k d u-–1	1	2	3	4	5	6	7	8	9	10	11
fUk.kk¸k d u-–2	2	3	1	6	4	5	8	7	10	11	9

In one competition two judges gave the ranks to 11 competants. Find out the correlation.

Competitors	A	B	C	D	E	F	G	H	I	J	K
Judge No. 1	1	2	3	4	5	6	7	8	9	10	11
Judge No. 2	2	3	1	6	4	5	8	7	10	11	9

Ik'Uk 22- Ckgmí'kh¸k Uknh ?kkVh ¸kkTkUkk d dkb IkkPk mí'¸kk dk LkEkÖkkb¸k\

Explain any 5 objectives of multipurpose river valley projects.

¼vFkOkk½

Ckgmí'kh¸k Uknh ?kkVh ¸kkTkUkk d dkb IkkPk nk"k fYkf[k, \

Explain any 5 demeritts of multipurpose river valley projects.

Ik'Uk 23- Ik.k IkfRk¸kkfXkRkk d IkkPk RkROkk dk LIk"V dhfTk, \

Explain the four elements of perfect competition.

¼vFkOkk½

vlk.k lkfRk;kfXkRkk d dkb lkkPk f0k'k"kRkk, CkRkYkkb;k\

Explain any 5 characteristics of imperfect competitons.

lk'Uk 24- CkM lkEkkUk d m|kXk d lkkPk YkkHk LkEkÖkkb;k\

Explain any five advantages of large scale industries.

¼vFkOkk½

fHkYkkb Ek Ykkgk ,0k bLIkkRk m|kXk d LFkkUkh dj.k d lkkPk dkj.k fYkf[k, \

Give any 5 reasons for the localisation of Iron and Steel industry in Bhilai.

lk'Uk 25- fUkEUk vkdMk Lk PkRkFkd f0kPkYkUk KkRk dhfTk, &

vk;k 0k"k Ek &	15	16	17	18	19	20	21
Nk«kk dh Lk[;kk&	4	6	10	15	12	9	4

Calculate Quartile deviatio from the following date :

Age in year -	15	16	17	18	19	20	21
No. of Student -	4	6	10	15	12	9	4

¼vFkOkk½

Ckh-dkEk-d 10 Nk«kk d vFk'kkL«k Ek lkkIRkkd fUkEUk g&

43] 48] 65] 57] 31] 60] 37] 48] 78] 59

bUk vkdMk Lk lkEkkIk f0kPkYkUk KkRk dhfTk, A

The marks obtained by 10 students of Economics are as follows -

43, 48, 65, 57, 31, 60, 37, 48, 78, 59

Find out standard deviation from it.

lk'Uk 26- vkfFkd fUk;kstu dh LkQYkRkk fdUk&fdUk CkkRkk lkj fUkHkj djRkh g\ ¼dkb N½

On which factors the success of economic planning depends? Explain. (any 6)

¼vFkOkk½

lkPk0k"kh;k ;kstukvk dk vf/kd lkHkkOkh CkUkkUk gRk LkÖkk0k nhfTk, \ ¼dkb N½

Give suggestions to make five year plans effective. (any 6)

Ik'Uk 27- f0kfUkEk¸k d dkb N¼dkj.kk dk LIk"V dhfTk,

Explain any six causes of Exchange.

¼vFkOkk½

LkEk¸k d vk/kkj Ikj CkkTkkj fdRkUk Ikdkj d gkRk g\ 0k.kUk dhfTk, \

Classify the market on the basis of time.

lEiy mRrj lV&lh

mRrj 1¼v½ Lkgh f0kdYlk PkfUk, &

¼1½ ¼v½ 0kLRk f0kfUkEk¸k dk

¼2½ ¼Ck½ lkknf'kd CkkTkkj

¼3½ ¼n½ mlk¸kDRk LkHkh dk A

¼4½ ¼v½ lkk- ,MEk fLEkFk

¼5½ ¼Ck½ lkR¸k{k dj Ek

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

¼1½ yxku

¼2½ C;kt

¼3½ vkHkk l

¼4½ 6 vxLr 1952

¼5½ nh?kdkyhu

mRRkj 2 0kLRk f0kfUkEk¸k Lk vk'k¸k & ,d 0kLRk ¸kk Lk0kk d CknYk nLkjh 0kLRk vFk0kk Lk0kk lkklRk djUk d dk¸k dk 0kLRk f0kfUkEk¸k dgRk gA 0kLRkvk d gLRkkRkj.k dh bLk lkfØ¸kk Ek nkUkk 0kLRkvk d mRlkknd L0k¸k mlkfLFkRk gkdj 0kkfNRk 0kLRkvk dk gLRkkRkj.k djRk g bLkfYk, bLk lkR¸k{k f0kfUkEk¸k Hkh dgk TkkRkk gA

mRRkj 3 EkkXk EkY¸k & og eY; ftl ij Ørk oLr dh ,d fuf'pr ek=k [kjhnu dk r;kj gk tkrk g ml ekx eY; dgr gA

mRRkj 4 vUk0kjRk ¸kkTkUkk & TkUkRkk Lkjdkj Uk lkkPk0kh lkPk0k"kh¸k ¸kkTkUkk dk mLkdh v0kf/k d ,d 0k"k lk0k vFkkRk Pkkj 0k"kk Ek gh LkEkklRk djd 1 vlkYk 1978 Lk ,d Ukb ¸kkTkUkk lkkjHk dj nh FkhA bLk ¸kkTkUkk dk **vUk0kjRk ¸kkTkUkk^^ dk UkkEk fn¸kk Xk¸kkA

mRRkj 5 TkCk nk lkn EkkYkkvk d CkhPk LkgLkCk/k Xk.kkd 'kU¸k ¼0½ Lk vf/kd fdRk 0-5 Lk dEk gkRkk g] RkCk bLk fUkEUk LRkj dk LkgLkCk/k dgk TkkRkk gA ¸kg /kUkkREkd ¸kk _.kkREkd gk Lkdkk gA

mRRkj 6 Ekk/¸k f0kPkYkUk & Ekk/¸k f0kPkYkUk Ikn J.kh d Ekk/¸k Ek 0¸kfDRkXkRk Ikn&EkY¸kk d f0kPkYkUkk dk vdXkf.kRkh¸k Ekk/¸k gkRkk gA Ekk/¸k f0kPkYkUk KkRk djUk d fYk, vk/kkj d :Ik Ek J.kh dk LkEkkURkj Ekk/¸k] Ekk/¸k dk vFk0kk Ckgykd dk Ik¸kkXk fd¸kk TkkRkk gA

mRRkj 7 XkV LkEkÖkkRkk & m:X0k IkLRkk0k dk gh MdYk IkLRkk0k dgRk gA mLk LkEk¸k XkV d Ekgkfukn'kd vkFkj MdYk Fk] 20 fLkRkCkj 1991 dk bLk IkLRkk0k dk IkLRkRk fd¸kk Xk¸kk] fTkLkEk 117 n'kk Uk bLk IkLRkk0k dk L0khdkj fd¸kk ,0k LkEkÖkkRk Ikj gLRkk{kj fd,A

mRRkj 8 dvk }kjk fLkPkkb d nk"k &

1- TkYk dk vHkk0k & vf/kd TkYk fUkdkYk TkkUk Ikj d, Lk[k TkkRk gA 0k"kk dh dEkh Lk Hkh d, Lk[k TkkRk gA

2- LkhfEkRk {k«k & dvk Lk d0kYk LkhfEkRk {k«kk Ek gh fLkPkkb LkEHk0k gA

3- vIk{kkÑRk Ekgxkk & d, dk TkYk Ukgj d TkYk Lk Ekgxkk IkMRkk gA

mRRkj 9 fEkLdk dk vFk & fEkLdk **EkLkj vk¸kjUk ,.M LVhYk 0kDLk dEIkUkh^^ gA bLkdh LFkkIkUkk LkUk 1923 Ek Hkæk0kRkh ¼EkLkj½ Ek gb FkhA vCk bLkdk UkkEk CknYkdj **f0k'0k'0kj¸kk vk¸kjUk ,.M LVhYk dEIkUkh^^ dj fn¸kk Xk¸kk gA

mRRkj 10 YkXkkUk dk fUk/kkj.k HkfEk dh ÅIkTk d vk/kkj Ikj fd¸kk TkkRkk g] ¸kg vf/k LkhEkkRk HkfEk RkFkk LkhEkkRk HkfEk dh ÅIkTk Ek vRkj }kjk fUk/kkfjRk fd¸kk TkkRkk g TkLk & EkkUk YkhfTk, vf/k LkhEkkRk HkfEk dk mRIkknUk 100 VUk g RkFkk LkhEkkRk HkfEk dk mRIkknUk 60 VUk g Rkk YkXkkUk 40 VUk gkXkkA

mRRkj 11 CkkTkkj EkY¸k ,0k LkhEkkRk EkY¸k Ek vRkj &

1- LkEk¸k

2- 0kkLRkf0kdRkk

3- 0kLRk

4- YkkXkRk

5- dhEkRk dh Ik0kfRRk

mRRkj 12 jkTkLOk }kjk vkfFkd fLFkjRkk & IkTkh0kknh n'kk Ek vkUk 0kkYk EkUnh dkYk 0k RkTkh dkYk Ek Lkjdkj vkfFkd fLFkjRkk dk bLk Ikdkj dEk djRkh g fd RkTkh dkYk Ek Lkjdkj TkUkRkk Lk djk d Ekk/¸kEk Lk :Ik¸kk Ykdj mUkdh Ø¸k&'kfDRk dEk dj nRkh g RkFkk EkUnh dkYk Ek YkkXkk dk jkTkXkkj ndj EkUnh dk nj djUk dk Ik¸kRUk djRkh gA bLk Ikdkj dUæh¸k Lkjdkj vIkUkh jkTkLOk UkhfRk Lk n'k dk vkfFkd Lkdv Lk CkPkkRkh gA Hkkj Rk Ek 0kRkEkkUk fLFkfRk Ek 0kLRkvk d HkkOk RkTkh Lk Ck< jg gA Lkjdkj EkY¸k 0kfnËk dk dEk djUk d fYk, 0kLRkvk d EkY¸k fUk/kkj.k dj jgh gA jk'kUk 0¸k0kLFkk }kjk LkLRk EkY¸k Ikj 0kLRk, mIkYkC/k djk jgh g Rkkfd n'k Ek EkY¸k 0kfnËk Ikj dkCk Ikk¸kk Tkk Lkdv

mRRkj 13 IkEkkIk f0kPkYkUk dh Xk.kUkk Lk«k &

$$\sigma = \sqrt{\frac{\sum d^2}{N}}$$

¸kk $\sqrt{\frac{\sum dx^2}{N}}$

Tkgk σ = IkEkkIk f0kPkYkUk

d^2 = LkEkkURkj Ekk/¸k Lk KkRk fd¸k Xk¸k f0kPkYkUkk dk 0kXk

N = dN Ikn Lk[¸kk

mRRkj 14 Lkk¸kkCkhUk d EkgR0k Ikj fVIIk.kh & Lkk¸kkCkhUk d EkgR0k Ikj fVIIk.kh fUkEUk g %&

1- nYkgUkh vkj fRkYkgUkh QLkYk

2- LkLRkk ,0k 'kh?k IkkPkd vkgkj

3- LkRkfYkRk vkgkj

4- Ik'k vkgkj

5- fdLkkUkk d fYk, YkkHknk¸kd

mRRkj 15 vgEknkCkkn Hkkj Rk dk EkUkPkLVj g] bUkd fUkEUk dkj.k g &

1- LFkkfIkRk gkUk d dkj.k

2- TkYk0kk¸k

3- LkLRkh EkTknjh

4- TkYk f0k|Rk 'kfDRk IkkIRk

mRRkj 16 LkhEkkURk mRIkkndRkk fLk)kRk dh IkEk[k EkkU¸kRkk fUkEUk Ikdkj g &

1- mRIkknUk Ek Ik¸kDRk Lkk/kUk dh LkEkLRk bdkb¸kk LkEkkUk jgRkh gA

2- ,d Lkk/kUk d CknYk nLkj Lkk/kUk dk IkfRkLFkkIkUk fd¸kk Tkk LkdRkk gA

3- mRIkknUk d Lkk/kUk Ik.k XkfRk'khYk gkRk gA

4- ¸kg fLk)kRk nh?kdkYk Ek YkkXk gkRkk gA

5- ¸kg fLk)kRk LkhEkkURk mRIkfRRk gkLk fUk¸kEk Ikj vk/kkfjRk gkRk gA

¼vFkOkk½

Hkkj Rk Ek jk"Vh¸k vk¸k dh 0kf) gRk LkÖkkOk &

1- /kUk dk LkEkkUk f0kRkj.k

2- IkkÑfRkd Lkk/kUkk dk mfPkRk mIk¸kkXk

3- Ckdk dk f0kdkLk

4- IkTkh fUkEkk.k dh nj Ek 0kf)

5- Ñf"k dk mfPkRk f0kdkLk

6- EkgXkkb Ikj jkd

mRRkj 17 0kRkEkkUk dj Ik.kYkh vf/kd ØEkCk) ,0k 0kKkfUkd Ik.k gk Xk¸kh vkj djk dk vk¸k dk IkEk[k Lkk/kUk EkkUkk TkkRkk gA IkkPkhUkdkYk Ek d0kYk LkkOkTkfUkd O¸k¸k dh IkfRk gRk ghdj YkXkk¸k TkkRk Fk] fdURk vk/kfUkd LkEk¸k Ek vk¸k dh EkkXk fnUk&IkfRkfnUk jkT¸kk }kjk Ck<Rkh Tkk jgh g 0kRkfYk, fdLkh Hkh ,d dj Lk bLk Ck<Rkh gb EkkXk dh IkfRk Ukgh dh Tkk LkdRkh g bLkfYk, Lkjdkj f0kfHkUUk mnn'¸kk dh IkfRk d fYk, dj YkXkkRkh gA

Ikk- ,MEk fLEkFk d Ckkn d vFk'kkfL«k¸kk Uk dN vU¸k fLk)kRkk dk IkfRkIkknUk fd¸kk g] fTkUg dj d vk/kfUkd fLk)kRk dgk TkkRkk gA ¸k fLk)kRk fUkEUkfYkf[kRk g &

1- mRIkkndRkk dk fLk)kRk

2- YkkPk dk fLk)kRk

3- Lkj YkRkk dk fLk)kRk

4- f0kf0k/kRkk dk fLk)kRk

5- vkfPkR,k dk fLk)kRk

¼vFk0kk½

CkTkV dk Ekg R0k &

1- CkTkV ,d 0k"k d fYk, vk,k&0,k,k dk f0k0kj.k gkRkk gA

2- CkTkV dk fUkEkk.k ,0k mLkd fUk,k«k.k dk dk,k TkfVYk gkRkk gA

3- CkTkV HkkOkh Ikfjfl LFkfRk,kk d vUkLkkj Ikfj0kRkUk'khYk Uk gkUk Ikj gkfUk dh vk'kdk jgRkh gA

4- CkTkV Ykk dLkHkk ,kk f0k/kkUkLkHkk Ek IkLRkRk djUk d Ik0k XkIRk j[kk TkkRkkk gA

5- CkTkV ,d PkUkkRkh Ik.k dk,k djRkk gA

mRRkj 18 LkgLkCk/k f0k'Yk"k.k nk ,kk vf/kd Pkjk d CkhPk LkCk/k dh fn'kk ,0k Ekk«kk dk CkRkYkkRkk gA ,kg dkj.k ,0k Ikfj.kkEk d CkhPk LkCk/k d f0k"k,k Ek dN Hkh Ukgh CkRkYkkRkk gA 0kkLRk0k Ek LkgLkCk/k f0k'Yk"k.k nk Pkjk Ek ,kg f0kPkj.k dk CkRkYkkRkk gA vFkkRk ,d Pkj Ek Ikfj0kRkUk gkUk Ikj nLkj Pkj Ek fdLk fn'kk Ek RkFkk fdRkUkh Ekk«kk Ek Ikfj0kRkUk gkRkk g ,kg LIk"V djRkk gA bLkdk dkj.k ,0k Ikfj.kkEk d CkhPk LkCk/kk dh 0,kk[,kk Ukgh djRkk gA

¼vFk0kk½

/kUkkREk d LkgLkCk/k & TkCk nk Pkjk Ek ,d fn'kk Ek Ikfj0kRkUk gkRkk g Rkk mUk Pkjk d CkhPk LkgLkCk/k /kUkkREk d dgYkkRkk gA mnk- & 0kLRk d EkY,k Ek 0kf) gkUk Ikj mLkdh IkfRk Ek Hkh 0kf) gkUkk] nkUkk d CkhPk /kUkkREk d LkgLkCk/k dk CkRkYkkRkk gA /kUkkREk d LkgLkCk/k

0kLRk dk EkY,k ¼IkfRk b- #- Ek½	10	20	30	40	50
0kLRk dh IkfRk ¼bdkb Ek½	100	120	150	180	250

bLkd f0kIkjhRk TkCk nk Pkjk Ek Ikfj0kRkUk f0kIkjhRk fn'kk Ek gkRkk g vFkkRk ,d Pkj

d EkY;k Ek 0kf) gkUk lkj nLkj Pkj Ek EkY;k Ek dh gkRkh g] Rkk mUkd CkhPk LkgLkCk/k _.kkREkd gkRkk gA

_.kkREkd LkgLkCk/k

0kLRk dk EkY;k ¼IkfRk b- #- Ek½	10	20	30	40	50
0kLRk dh IkfRk ¼bdkb Ek½	100	80	60	30	20

mlk;kDRk RkkfYkdk Ek EkY;k 0k IkfRk dk Ck<Ukk /kUkkREkd LkgLkCk/k g RkFkk EkY;k Ck<Uk lkj EkkXk dEk gkUkk _.kkREkd LkgLkCk/k n'kkRkk gA

mRRkj 19

x series	Rank (x)	y series	Rank (y)	Difference of rank (x – y)	Square of rank d2
2	6	1	7	–1	1
1	7	3	5	2	4
4	4	2	6	–2	4
3	5	4	4	1	1
5	3	5	3	0	0
7	1	6	2	–1	1
6	2	7	1	1	1
$N = 7$		$N = 7$			$\sum d^2 = 12$

$$r = 1 - \frac{6 \times \sum d^2}{N^3 - N}$$

Tkgk r = fLlk;kjEkUk dk dkfV vRkj Lkg LkCk/k Xk.kkd

$\sum d^2$ = ¼nkUkk Jf.k;kk d ØEkk Ek vRkj dk ;kkXk½

N = ¼lknk dh Lk[;kk½

vRkh EkkUk j[kUk lkj

$$r = 1 - \frac{6 \times 12}{7^3 - 7}$$

$$r = 1 - \frac{72}{343 - 7}$$

$$r = 1 - \frac{72}{336}$$

$$r = \frac{264}{336}$$

$$r = 0.7857$$

¼vFkokk½

mRRkj 20 Hkkjrk Ek vkfFkd mnkjhdj.k dh vkO;'kdRkk d vUkd dkj.k g %&

1- jkTkXkkj LdYk

2- CkTkV ?kkV Ek fUkjURkj 0kf)

3- Ekæk LQhfRk Ek 0kf)

4- IkfRkdYk HkXkRkkUk LkRkYkUk

5- f0kfUk;kkXk <kPk Ikj IkfRkdYk IkHkk0k

6- f0kn'kh _.kk dk Ck<Rkk CkkÖk

7- [kkMh Lkdv

¼vFkokk½

mnkjhdj.k d YkkHk &

1- vkfFkd mnkjhdj.k Lk Hkkjrk dk vkfFkd Lkdv dkQh LkhEkk Rkd dEk gk Xk;kk g ,0k f0kn'kh f0kfUk;kkXk dh LkhEkk Ck<kUk Lk f0kn'kh Ekæk dk"k Ek dkQh 0kf) gbA

2- Lkk0kTkfUkd {k«k d fUkTkhdj.k dk IkkRLkkgUk fEkYkkA bLkLk nk YkkHk g,] IkgYkk Lkjdkj dk Ik;kkIRk /kUk jkf'k fEkYkh vkj fUkTkh gkFkk Ek LkPkkYkUk 0;k0kLFkk TkkUk Lk d'kYkRkk Ek 0kf) gbA

3- bULIkDVj jkTk LkEkkIRk djUk] Ykk;kLkLk YkUk dh vfUk0kk;kRkk LkEkkIRk djUk Lk m|kXk Ek dkQh Lk/kkj gvk g RkFkk fj'0kRk[kkjh 0k Hk"VkPkkj Ek dkQh dEkh vk;kh gA

4- Hkkjrk Ek LkUk 1991 Lk Ykdj vkTk Rkd YkXkkRkkj f0kn'kh lkTkh fUk0k'k lkTkh fUk0k'k Ek 0kf) gk jgh gA vFk0¸k0kLFkk d LkHkh {k«kk Ek vlkUkk ¸kkXknkUk nUk d fYk, f0kn'kk Lk Lkdlk lkLRkk0k lkklRk g, gA

mRRkj 21 XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj vUkdYk lkHkk0k fUkEUk g %&

1- XkV LkEkÖkkRk Lk Hkkjrk d fUk¸kkRk Ek Hkkjh 0kf) dh LkEHkk0kUkk, gA

2- f0kn'kh lkfRk¸kkfXkRkk d dkj.k Hkkjrkh¸k EkkYk dh Xk.k0kRRkk Ek dkQh Lk/kkj gkXkkA

3- lkkÑfRkd :lk Lk lknk gkUk 0kkYkh 0kLRkvk d lkVUV dh vk0k'¸kdRkk Ukgh lkMXkhA

4- f0kn'kh lkTkh fUk0k'k Ek 0kf) gkXkh] fTkLkLk Hkkjrk d vkfFkd Lk/kkj dk¸kØEk Ek RkTkh vk¸kXkhA

¼vFk0kk½

XkV LkEkÖkkRk dk Hkkjrk d fYk, Pkkj lkfRkdYk lkHkk0k fUkEUk g %&

1- LkhfEkRk Lkk/kUkk d dkj.k Hkkjrkh¸k dElkfUk¸kk Ckgjk"Vh¸k dElkfUk¸kk dh lkfRkLlk/kk Ek fVd Ukgh Lkdlk XkhA

2- Hkkjrk Ek dN n0kkb¸kk d EkY¸k Ek CkRkgk'kk 0kf) gkXkh] ¸kg EkY¸k 0kf) 40 Lk 100 lkfRk'kRk gk Lkdlk Rkh gA

3- Hkkjrk dh LkEkPkh Lk0kk 0k mRlkknd Rkk 0¸k0kLFkk lkj dN f0kn'kh dElkfUk¸kk dk gLRk{klk gk Tkk,Xkk fTkLkLk Hkkjrk dk Ukdlkk Uk gkXkkA

4- vk¸kkfRkRk 0kLRkvk lkj YkXkUk 0kkYk 'kYdk lkj Hkkjh dVkRkh djUkh lkMXkhA

mRRkj 22 lk.k lkfRk¸kkfXkRkk d lkkPk RkR0k fUkEUk g %&

1- ØRkk ,0k f0kØRkkvk dh vf/kd Lk[¸kk

2- mRlkknUk Ek ,d :lkRkk

3- CkkTkkj dh n'kkvk dk lk.k KkUk

4- lkfj0kgUk YkkXkRk dk vHkk0k

¼vFk0kk½

vlk.k lkfRk¸kkfXkRkk d lkkPk f0k'k"kRkk, fUkEUk g %&

1- ØRkk&f0kØRkkvk dh Lk[¸kk LkhfEkRk

2- CkkTkkj dk Ik.k KkUk Ukgh

3- 0kLRkvk Ek ,d :IkRkk Ukgh

4- Ik.k XkfRk'khYkRkk dk vHkk0k

5- IkfRk,kkfXkRkk dk vHkk0k

6- Ikfj0kgUk dh ÅPkh YkkXkRk

7- EkY,kk Ek vRkj

8- f0kKkIkUk

mRRkj 23

vk,k 0k"kk Ek (M)	vk0kfRRk (f)	LkPk,kh vk0kfRRk (c.f.)
15	4	4
16	6	10
17	10	20
18	15	35
19	12	47
20	9	56
21	4	60

Q_1 = size of $\left(\frac{N+1}{4}\right)^{th}$ item

Q_1 = size of $\left(\frac{60+1}{4}\right)$item

,kg C.F. 20 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 17 gh Q_1 g A

Q_3 = size of $3\left(\frac{N+1}{4}\right)^{th}$ item

Q_3 = size of $3\left(\frac{60+1}{4}\right)$item

,kg C.F. 47 Ek vkRkk g vRkh bLkd LkkEkUk 0kkYkk Ikn 19 gh Q_3 g A

PkRkFkd f0kPkYkUk Q.D = $\frac{Q_3 - Q_2}{2} = \frac{19-17}{2} = \frac{2}{2} = 1 years$

PkRkFkd f0kPkYkUk Xk.kkd (Coefficient of Q.D.)

$$= \frac{Q_3 - Q_1}{Q_3 + Q_2} = \frac{19-17}{19+17} = \frac{2}{36} = 0.0555$$

¼vFkOkk½

ØEkkd	lkn EkY;k x	dfYIkRk Ekk/;k Lk f0kPkYkUk dx(A= 60)	f0kPkYkUkk dk 0kXk dx^2
1.	43	–17	289
2.	48	–12	289
3.	65	5	144
4.	57	–3	9
5.	31	29	841
6.	60	0	0
7.	37	–23	529
8.	48	–12	144
9.	78	18	324
10.	59	–1	1
N =10	$\sum x$ =526	$\sum dx$ =–74	$\sum dx^2$ =2306

LkkEkkURkj Ekk/;k dh Xk.kUkk%&

$$\bar{X} = \frac{\sum x}{N} = \frac{526}{10} = 52.6$$

Tkgk lkj $\bar{X}$ = LkEkkURkj Ekk/;k

$\sum x$ = lkn EkY;kk dk ;kkXk

N = lknk dh Lk[;kk

lkEkkIk f0kPkYkUk dh Xk.kUkk %&

$$\sigma = \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

$$\sigma = \sqrt{\frac{2306}{10} - \left(\frac{-74}{10}\right)^2}$$

$$\sigma = \sqrt{230.6 - (-7.4)^2}$$

$$\sigma = \sqrt{230.6 - 54.76}$$

$$\sigma = \sqrt{175.84}$$

$$\sigma = 13.26$$

Tkgk σ = IkEkkIk f0kPkYkUk

$\sum dx$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk dk ¸kkXk

$\sum dx^2$ = dfYIkRk Ekk/¸k Lk fUkdkYk Xk¸k f0kPkYkUkk d 0kXkk dk ¸kkXk

N = Iknk dh Lk[¸kk

mRRkj 24 Ckgnn'¸kh Uknh ?kkVh ¸kkTkUkkvk d mnn'¸k ¼EkgR0k½ ¸kk YkkHk vXkfYkf[kRk g &

1- fLkPkkb Lkf0k/kk & Uknh ?kkVh ¸kkTkUkkvk dk IkEk[k mnn'¸k fLkPkkb g A dh vk0k'¸kdRkk dk n[kRk g, ¸k ¸kkTkUkk, CkUkkb Xkb gA

2- Ik¸kVUk LFkYkk dk fUkEkk.k & Ukfn¸kk d ?kkfV¸kk Ek Ckk/k LkEkhIk m|kUk ,0k mIk0kUk

3- EkRL¸k IkkYkUk m|kXk & bUk ¸kkTkUkkvk Ek CkM&CkM TkYkk'k¸kk dk fUkEkk.k gkRkk g] fTkUkEk EkRL¸k IkkYkUk m|kXk dk vkLkkUkh Lk dk¸kkfU0kRk fd¸kk Tkk Lkdkk gA

4- HkfEk dVk0k Ikj jkd & bUk ¸kkTkUkkvk d f0kdkLk Lk RkTk CkgUk 0kkYkh Ukfn¸kk dh XkfRk /khEkh gk TkkRkh g vkj Ckk< fUk¸kf«kRk gk TkkRkk gA

¼vFk0kk½

Ckgnn'kh¸k Uknh ?kkVh ¸kkTkUkk d N% nk"k g

1- db Xkk0kk dk MCk TkkUkk

2- mIkTkkÅ [kRkk dk Ckdkj gk TkkUkk

3- Ukgjk Ek vPkUkkd IkkUkh NkMUk Lk fUkPkYk fgLLk Ek gkfUk

4- CkhEkkfj¸kk dk Ikdkik

5- vdkYk EkR¸k

6- vlkR;k{k 0;k;k

mRRkj 25 HkkjRk Ek CkM IkEkkUk d m|kXkk Lk vUkd YkkHk gkRk g] fTkUkEk fUkEUkfYkf[kRk f0k'k"k mYYk[kUkh;k g %&

1- jk"Vh;k vk;k Ek 0kf) & CkM IkEkkUk d m|kXkk d f0kdkLk Lk jk"Vh;k vk;k Ek 0kf) dh Tkk Lkd Rkh gA

2- jkTkXkkj Ek 0kf) & CkM IkEkkUk d m|kXkk dk EkkYk LkLRkk gkRkk g vRkh CkkTkkj Ek EkkXk vf/kd gkRkh gA vf/kd EkkXk dk Ikjh djUk d fYk, m|kXkk dk f0kLRkkj fd;kk TkkRkk gA

3- LkURkfYkRk f0kdkLk & fdLkh n'k d vkfFkd <kPk Ek Lk/kkj ,0k LkURkfYkRk f0kdkLk vk0k';kd gkRkk gA

4- f0kn'kh IkTkh vkdf"kRk & CkM IkEkkUk d m|kXkk dk LkfUk;kkfTkRk f0kdkLk] f0kn'kh f0kfUk;kkDRkkvk dk Hkh vkdf"kRk djRkk gA

5-

¼vFk0kk½

1- dPPkk EkkYk & Ykkgk bLIkkRk m|kXk dk dPPk EkkYk dh IkkfIRk LkCkLk vf/kd IkHkkf0kRk djRkh g] fHkYkkb d fUkdV 32 fdEkh- nj nYYkh&jkTkgjk EkkXk Ek Ykkg v;kLd Ikk;kk TkkUkk bLkd dUæh;kdj.k dk Ek[;k dkj.k gA

2- dk;kYkk ,0k f0k|Rk 'kfDRk & mLk m|kXk d fYk, dk;kYkk Ökfj;kk RkFkk dkjCkk Lk gkRkh g] Tkk fd fHkYkkb d fUkdV gA

3- TkYk IkfRk & fHkYkkb Lk;k«k dk TkYk vkIkfRk RkkUnYkk Ukgj d Tkfj;k] XkXkjYk MEk Lk gkRkk g Tkk bLk LFkkUk Lk UkTknhd gA

4- jYkEkkXk dh Lkf0k/kk & fHkYkkb bLIkkRk Lk;k«k dk EkECkb gk0kMk jYkEkkXk dh Lkf0k/kk IkkIRk g bLkd vfRkfjDRk LkMd EkkXk jk"Vh;k jkTkEkkXk ØEkkd 6 Lk TkMk gA

5- f0kn'kh Rkd Ukhdh & bLk m|kXk d LFkkUkh;kdj.k Ek Lkkf0k;kRk Lk?k ¼Ik0k Ek½ dh Rkd Ukhdh ,0k f0kRRkh;k Lkgk;kRkk IkkIRk gvk gA

mRRkj 26 f0kfUkEk;k d N% dkj.k fUkEUkfYkf[kRk g &

1- nkUkk lk{kk dk YkkHk

2- nk jk"Vk dk YkkHk

3- vk0k'¸kd 0kLRkvk dh lkkfIRk

4- JEk f0kHkkTkUk Lk YkkHk

5- CkkTkkj dk f0kLRkkj

6- lkkÑfRkd Lkk/kUkk dk vf/kdRkEk mlk¸kkXk

7- Tkh0kUk LRkj ÅPkk gkXkkA

8- vURkjk"Vh¸k mUUkfRk Ek Lkgk¸kd

9- vk|kfXkd mUUkfRk Ek Lkgk¸kd

10- LkdV d LkEk¸k Lkgk¸kd

¼vFk0kk½

LkEk¸k d vk/kkj lkj CkkTkkj Pkkj lkdkj d gkRk g &

1- vfRk vYlkdkYkhUk ¸kk nfUkd CkkTkkj & bLk lkdkj d CkkTkkj Ek 0kLRk dh lkfRk fUkf'PkRk jgRkh g bLkEk dkb lkfj0kRkUk Ukgh fd¸kk Tkk LkdRkk vRkh EkkXk d dkEk gkUk lkj EkY¸k Ek dEkh RkFkk EkkXk d Ck<Uk lkj EkY¸k Ek 0kf) gkRkh gA

2- vYlkdkYkhUk CkkTkkj & vYlkdkYkhUk CkkTkkj 0kg g fTkLkEk 0kRkEkkUk Lkk/kUkk dh Lkgk¸kRkk Lk FkkMk CkgRk mRlkknUk ?kVk¸kk ¸kk Ck<k¸kk Tkk LkdRkk gA

3- nh?kdkYkhUk CkkTkkj & fTkLk v0kf/k Ek fdLkh 0kLRk dh lkfRk Ek EkkXk d vUkLkkj lkfj0kRkUk dk lk¸kkIRk v0kLkj jgRkk g] mLk v0kf/k d CkkTkkj dk nh?kdkYkhUk CkkTkkj dgRk gA

4- vfRk nh?kdkYkhUk CkkTkkj & vfRk nh?kdkYkhUk CkkTkkj dk LkCk/k bRkUkh YkCkh v0kf/k Lk jgRkk g fTkLkd vURkXkRk mlkHkkDRkk dh :fPk] Q'kUk ,0k L0kHkk0k vkfnA

mRRkj 27 vkfFkd fUk¸kkTkUk dh LkQYkRkk dh fUkEUk CkkRk g &

1- Yk{¸kk dk fUk/kkj.k

2- ¸kkTkUkk dh n'kk

3- fUkf'PkRk v0kf/k

4- lkkFkfEkdRkk

5- fUk¸k«k.k

6- LkEkU0k¸k

7- vU¸k

¼vFk0kk½

lkPk0k"kh¸k ¸kkTkUkkvk dk vf/kd lkHkkk0kh CkUkkUk gRk LkÖkk0k &

1- ¸kkTkUkk, vfRk f0k'kkYk ,0k vfRk EkgR0kkdk{kh Uk gkA

2- lkkFkfEkdRkk dk fUk/kkj.k jk"V d vUkdYk gkA

3- f0kn'kh Lkgk¸kRkk ,0k _.k lkj fUkHkjRkk LkEkkIRk gk

4- ¸kkTkUkk dk fUkEkk.k lkEkkf.kRk TkkUkdkfj¸kk d vk/kkj lkj gk

5- Hk"VkPkkj RkFkk /kUk d n#Ik¸kkXk lkj dBkj fUk¸k«k.k

6- fUk¸kkRk Lk0k/kUk lkj f0k'k"k CkYk