SUMMER ASSIGNMENT: 2024-25
Class: XII (Commerce Stream)

General Instructions:-
1. **All the subject assignments have to be done in separate files using project papers.**
2. **Submission date:- 12th June, (Wednesday)**
3. **The Summer Break is scheduled from 05th May 2024 – 09th June, 2024. The students will resume the school from 10th June, 2024.**

   <u>Note:-</u> These assignments are a part of your internal assessment & will be marked accordingly out of 10.

ENGLISH CORE (301)

Q1. As Principal of Sardar Patel Vidyalaya, Lucknow, draft notice in not more than 50 words informing students of the change in school timings with effect from the 1st of October. State valid reasons for the change.

Q2. You are Secretary of the History Club of Vidya Mandir School. Draft a notice in not more than 50 words informing students of a proposed visit to some important historical sites in your city.

Q3. You are Srinivas/Srinidhi of D.P. Public School, Nagpur. As Student Editor of your school magazine, draft notice in not more than 50 words for your school notice board inviting article sketches from students of all classes.

Q4. You are Secretary of J.P. Narain Housing Society, R.W.A., Meerut. Draft a notice in not more than 50 words stating that the second instalment of maintenance charges falls due on 31st March 2011, and requesting the members to pay before the due date. Sign as Anil/Anita.

Q5. You are President of the Cultural Society of your school. You are planning to organise a cultural programme. Write a notice for the school noticeboard inviting names of students willing to participate. You are Sudhir, the secretary of the society.

Q6. "Our language is a part of our culture and we are proud of it." Describe how regretful M Hamel and the village elders are for having neglected their native language, French.

Q7. Discuss how the story "The Last Lesson" provides strategies for resistance and protection of one's identity and community through its events and characters. Provide relevant textual details to support your argument.

Q8. Deduce why the act of M Hamel writing "Vive La France!" on the blackboard is considered symbolic.

Q9. Would you agree that promises made to poor children are rarely kept? Why do you think this happens in the incidents narrated in "Lost Spring"?

Q10. The bangle makers of Firozabad make beautiful bangles and make everyone happy but they live and die in squalor. Elaborate the hazards of working in bangle making industry

Q11. The poem by Kamala Das beautifully captures the intricate relationship between a mother and a daughter. Truly the bond that mothers share with their children remains unparalleled and special. Write an article on the topic-"The Role of a Mother". You are Arun/Anuja.

Q12. State the common issues faced by most of the elderly people in the current times with reference to the poem "My Mother at Sixty Six".

Q13. Environment is degrading and humans are the primary reason why the earth's health is in the constant decline. Write an article on the topic "Role of Youth in Preserving the Environment" to create awareness on the issue with contextual reference from the poem by Neruda.

Q14. You are a psychiatrist and your first patient is Charley. His proclamation of the Third Level really surprised you. More importantly the way his wife Louisa took your comment personally is really something that you didn't see coming. Write a diary narrating your experience of the counselling session.

Q15. Imagine that you come across Louisa's diary. What might you find in it about the Third Level? Compose at least one diary entry based on any of the events from the story "The Third Level".

ECONOMICS (030)

Q1. Assume there are only three industries in the imaginary economy, namely A, B and C. The following data about their transaction are given below:
   (i) A buys ₹100 worth goods from B, sells ₹200 worth of goods to C and ₹100 worth of goods to households.
   (ii) C sells ₹400 worth of goods to household.
   Calculate the value of output and income generation by each of the above industries.

Q2. An economy has only two firms A and B. On the basis of following information about the firms, find out (a) Value added by firm A and B (b) GDP_{MP}.

	Particulars	₹ in crores
(i)	Exports by firm A	20
(ii)	Imports by firm A	50
(iii)	Sales to households by firm A	90
(iv)	Sales to firm B by firm A	40
(v)	Sales to firm A by firm B	30
(vi)	Sales to household by firm B	60

Q3. Calculate GNP_{FC} by (a) Income Method (b) Expenditure Method:

	Particulars	₹ in crores
(i)	Sales by firm A	100
(ii)	Purchases from firm B by firm A	40
(iii)	Purchases from firm A by firm B	60
(iv)	Sales by firm B	200
(v)	Closing stock of firm A	20
(vi)	Closing stock of firm B	35
(vii)	Opening stock of firm A	25
(viii)	Opening stock of firm B	45
(ix)	Indirect taxes paid by both the firms	30

Q4. Calculate NVA_{FC}.

Particulars	₹ in crores
Price per unit of output	25
Output sold	1000
Excise duty	5000
Depreciation	1000
Change in stock	(-)500
Intermediate cost	7000

Q5. From the following data about a firm X for the year 2000-01, calculate the net value added at market price during that year:

	Particulars	₹ in crores
(i)	Sales	90
(ii)	Closing stock	25
(iii)	Opening stock	15
(iv)	Indirect taxes	10
(v)	Depreciation	20
(vi)	Intermediate consumption	40
(vii)	Purchases of raw material	15
(viii)	Rent	5

Q6. Calculate value added by firm A and firm B.

	Particulars	₹ in crores
(i)	Domestic sales by firm A	4,000
(ii)	Exports by firm A	1,000
(iii)	Purchases by firm A	1,200
(iv)	Sales by firm B	2,940
(v)	Purchases by firm B	1,800

Q7. Calculate GVA_{FC}

	Particulars	₹ in crores
(i)	Sales	180
(ii)	Rent	5
(iii)	Subsidies	10

(iv)	Change in stock		15
(v)	Purchases of raw material		100
(vi)	Profits		25

Q8. **Calculate 'intermediate consumption'**

	Particulars	₹ in crores
(i)	Value of output	200
(ii)	Net value added at factor cost	80
(iii)	Sales tax	15
(iv)	Subsidies	5
(v)	Depreciation	20

Q9. **Calculate 'intermediate consumption'**

	Particulars	₹ in crores
(i)	Net value added at factor cost	300
(ii)	Intermediate consumption	200
(iii)	Indirect tax	20
(iv)	Depreciation	30
(v)	Change in stock	(-)50

Q10. **Calculate GDP_{MP}**

	Particulars	₹ in crores
(i)	Private final consumption expenditure	15,000
(ii)	Government final consumption expenditure	11,500
(iii)	Gross fixed capital formation	1,000
(iv)	Increase in stock	200
(v)	Exports	500
(vi)	Imports	700
(vii)	Capital consumption allowances	650
(viii)	Net indirect taxes	500

Q11. **Calculate National income:**

	Particulars	(₹)
(i)	Opening stock	50
(ii)	Closing stock	60
(iii)	Consumption of fixed capital	10
(iv)	Private final consumption expenditure	500
(v)	Net exports	(-)25
(vi)	Net factor income from abroad	10
(vii)	Compensation of employees	100
(viii)	Direct purchases of non-durable goods from abroad by general government	10
(ix)	Net purchases of goods and services by general government in domestic market	100
(x)	Net capital formation	160
(xi)	Net indirect taxes	150

Q12. **Calculate National income:**

	Particulars	₹ in crores
(i)	Private final consumption expenditure in domestic market	1750
(ii)	Government final consumption expenditure	100
(iii)	Consumption of fixed capital	25
(iv)	Net exports	(-) 25
(v)	Net factor income from abroad	(-) 20
(vi)	Gross fixed capital formation	300
(vii)	Change in stock	50
(viii)	Direct purchases from abroad by resident household	50

(ix)	Direct purchases by non-resident in domestic market		100
(x)	Net indirect taxes		100

Q13. **Calculate NNP$_{MP}$**

	Particulars	₹ in crores
(i)	Private final consumption expenditure	200
(ii)	Net indirect taxes	20
(iii)	change in stock	(-) 5
(iv)	Net current transfer from abroad	(-) 10
(v)	Government final consumption expenditure	50
(vi)	Consumption of fixed capital	15
(vii)	Net fixed capital formation	30
(viii)	Net factor income from abroad	5
(ix)	Net imports	10

Q14. **Calculate NNP$_{FC}$**

	Particulars	₹ in crores
(i)	Government final consumption expenditure	60
(ii)	Net exports	10
(iii)	Change in stock	5
(iv)	Consumption of fixed capital	20
(v)	Private final consumption expenditure	250
(vi)	Net factor income from abroad	(-) 5
(vii)	Net domestic capital formation	40
(viii)	Net current transfers from abroad	10
(ix)	Net indirect taxes	15

Q15. **Calculate GNP$_{MP}$**

	Particulars	₹ in crores
(i)	Imports	20
(ii)	Government final consumption expenditure	60
(iii)	Net factor income from abroad	(-) 5
(iv)	Net current transfer from abroad	5
(v)	Private final consumption expenditure	200
(vi)	Subsidies	10
(vii)	Indirect taxes	40
(viii)	Net domestic capital formation	70
(ix)	Exports	20
(x)	Consumption of fixed capital	15

Q16. **Calculate GNP$_{FC}$**

	Particulars	₹ in crores
(i)	Net change in stock	50
(ii)	Government final consumption expenditure	100
(iii)	Net current transfer to abroad	30
(iv)	Gross domestic fixed capital formation	200
(v)	Private final consumption expenditure	500
(vi)	Net imports	40
(vii)	Depreciation	70
(viii)	Net factor income to abroad	(-) 10
(ix)	Net indirect taxes	120
(x)	Net capital transfer to abroad	25

Q17. **Calculate NNP$_{FC}$**

	Particulars	₹ in crores
(i)	Private final consumption expenditure	900
(ii)	Profit	100
(iii)	Government final consumption expenditure	400
(iv)	Net indirect taxes	100
(v)	Gross domestic capital formation	250
(vi)	Change in stock	50
(vii)	Net factor income from abroad	(-) 40
(viii)	Consumption of fixed capital	20
(ix)	Net imports	30

BUSINESS STUDIES (054)

Q1. It help in establishing interchange ability of manufactured part and products.

Q2. This technique given by Taylor violates one principle given by Fayol.

Q3. It aims at elimination of superfluous varieties, sizes and dimensions of the product.

Q4. This technique of Taylor is an extension of the principle of Fayol.

Q5. It refers to finding out one best way of doing a particular job.

Q6. Nutan Tiffin Box service was started in Mumbai by the Mumbai Dabbawalas, the Dabbawalas who are the soul of entire Mumbai aim to provide prompt and efficient services by providing tasty homemade tiffin to all office goers at the right time and place. The service is uninterrupted even on the days of bad weather, political unrest and social disturbances. Recently, they have started online booking system through their website 'mydabbawala.com'. Owing to their tremendous popularity amongst the happy and satisfied customers and members, the Dabbawalas were invited as guest lecturer by top business schools. The Dabbawalas operate in a group of 25-30 people along with a group leader. Each group teams up with other groups in order to deliver the tiffins on time. They are not transferred on frequent basis as they have to remember the addresses of their customers. They follow certain rules while doing trade—no alcohol during working hours; no leaves without permission; wearing white caps and carrying ID cards during business hours. Recently, on the suggestion of a few self-motivated fellow men, the dabbawalas thought out and executed a plan of providing food left in tiffins by customers to slum children. They have instructed their customers to place red sticker if food is left in the tiffin, to be fed to poor children later.
State any one principle of management given by Fayol and one characteristic of management mentioned in the above case.

Q7. Every year a meeting is organized in the lawns of the owner of a company. In this meeting the owner of the company grants some funds for the benefit of the families of the employees. The employees on the other hand never resist any change or put excessive demands. The general environment in the company is very supportive to the employees. The employee turnover ratio is very low.
Which concept of management is discussed here? Which principle of management will be easily followed here?
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Q8. Aapka Apna Vehicles is a vehicle manufacturing company. The company has the same unit producing both scooters and cars. This leads to confusion among the employees regarding the reporting as well as differentiation of work.
Which principle of Fayol is violated here? Why? State the principle. Give an immediate outcome of the violation of this principle.

Q9. Sanchit, after completing his entrepreneurship course from Sweden returned to India and started a coffee shop 'Aroma Coffee Can' in a famous mall in New Delhi. The specialty of the coffee ship was the special aroma of coffee and a wide variety of flavors to choose from. Somehow, the business was neither profitable nor popular. Sanchit was keen to find out the reason. He appointed Sandhya, an MBA from a reputed college, as a Manager to find out the causes for the same. Sandhya took feedback from the clients and found out that though they loved the special unique aroma of coffee but were not happy with the long waiting time being taken to process the order. She analyzed and found out that there were many unnecessary obstructions in between which could be eliminated. She fixed a standard time for processing the order. She also realized that there were some flavor's whose demand was not enough. So, she also decided to stop the sale of such flavor's. As a result within a short period Sandhya was able to attract the

customers. Identify and explain any two techniques of scientific management used by Sandhya to solve the problem.

Q10. Davinder is a class twelfth commerce student in a reputed school in Punjab. Satinder is his elder brother who is doing his Masters in Hospital Administration from Delhi after completing his B.Sc course. During vacations when Satinder comes home, Davinder shows him the business studies project that he is preparing on the topic 'Principles of Management'. Satinder tells him that these principles are also a part of MBA course curriculum at the beginner's level as they form the core of management in practice. But he finds these principles different from those of pure science. In context of the above case: Outline the concept of principles of management.

1. Why does Satinder find the principles of management different from those of pure science?
2. Why do the principles of management form the core of management in practice? Explain by giving any two points highlighting the importance of principles of management.

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Project work (any one out of the following)
1. Marketing management
2. Principles of management
3. Business environment
4. Stock market.
(Content as per class discussion)

ACCOUNTANCY (055)

Q1. Mohisin Ltd invited application for 40000 shares @ Rs.10 at a premium of 10% payable as follows:- On Application Rs.2 per share On Allotment Rs.5 per share (including premium) On First & Final Call Rs.4 Per share Company Received application for 60,000 shares. Directors rejected 12,000 shares application and remaining accepted on pro rata basis. All money received except the allotment money and final call on 400 shares .Pass journal entries.

Q2. Devika Ltd invited application for 1,00,000 shares @ Rs.10 at a premium of Rs. 2/- payable as follows:- On Application Rs.3 per share On Allotment Rs.5 per share (including premium) On First & Final Call Rs.4 Per share Company Received application for 1,40,000 shares. Directors allotted shares on the following basis:- (i) To applicants for 10,000 shares -------- Nil (ii) To applicants for 20,000 shares -------- Full To applicants for 40,000 shares --------- 30,000 shares To applicants for 70,000 shares ---------50,000 shares. All excess application money is to be adjusted against amount due on allotment Mr. X, holder of 600 shares out of the group applied for 40,000 shares failed to pay allotment money and call money. Mr.Y, applicant of 1,400 shares, out of the group applied for 70,000 shares failed to pay the allotment money and call money. Pass Journal entries.

Q3. Mattoo Enterprises purchased Machinery worth Rs.99,000 from Kunal Ltd. The amount was paid by issue of Equity Shares of Rs.100 each. Pass Journal entries in the following cases: If Shares are issued at Par. If Shares are issued at a Premium of 10%

Q4. Laksha Ltd purchased Land and Building worth Rs.2,97,000 from Mark &Co. The amount was paid by issue of 12% Preference Shares of Rs.100 each. Pass Journal entries in the following cases: If Shares are issued at Par. If Shares are issued at a Premium of 10%

Q5. Aradhya Ltd purchased Furniture for Rs.9,00,000 payable as to Rs.1,30,000 in cash and balance by an issue of Equity Shares of Rs.100 each at a premium of 10%.

Q6. Ritik Ltd took over assets of Rs.10,00,000 and liabilities of Rs.2,40,000 of Sagar Ltd for the purchase consideration of Rs.8,80,000. Ritik Ltd paid the purchase consideration by issuing Shares of Rs.100 each at 10% premium. Give Journal entries.

Q7. Rohit Ltd took over assets of Rs.3,00,000 and liabilities of Rs.65,000 of Akash Ltd for the purchase consideration of Rs.1,90,000. Rohit Ltd paid the purchase consideration by issuing Equity Shares of Rs.100 each at 25% premium. Give Journal entries.

Q8. Citizen Watches Ltd. issued 7,500, 8% Debentures of Rs. 100 each at par for subscription payable along with application. Subscription was received for 7,000 Debentures. The debentures were duly allotted. Pass necessary journal entries.

Q9. Narain Laxmi Ltd. invited applications for issuing 7,500; 12% Debentures of Rs.100 each at a premium of Rs.35 per debenture. The full amount was payable on application. Applications were received for 10,000 Debentures. Debentures were allotted to the remaining applicants. Pass necessary Journal entries for the above transactions in the books of Narain Laxmi Ltd.

Q10. Raj Ltd. issued 5,000; 8% Debentures of Rs.100 each at a discount of 5% payable in lumpsum. Pass necessary Journal entries.

Q11. Nipa Limited issued Rs.10,00,000 Debentures of Rs.100 each at discount of 10% redeemable at par, payable as 40 on application and the balance on allotment. Journalize.

Q12. Y Ltd issued Rs.20,00,000 9% Debentures of Rs.100 each at a discount of 4% redeemable at par after 4 years.. The full amount was payable on application. Pass necessary journal entries.

Q13. Z ltd, issued Rs.5,00,000 9% debentures of 200 each at par redeemable after 3 years at 20% premium. Pass entries for issue of debentures.

Q14. A ltd. Issued 10,000 10% debentures of Rs.500 each issued at par redeemable after 5 years @ 30% premium payable as Rs.200 on application and balance on allotment. Journalize.

Q15. B ltd. Issued Rs.5,00,000 8% debentures of 200 each @ 20% premium redeemable at 30% premium after 3 years. Journalize.

Q16. Alok Ltd. issued 7,000, 10% Debentures of Rs.500 each at a premium of Rs.50 per debenture redeemable at a premium of 10% after 5 years. According to the terms of issue, Rs.200 was payable on application and balance on allotment. Record necessary Journal entries at the time of issue of 10% Debentures.

Q17. Alka Ltd. issued 5,000, 10% Debentures of Rs.1,000 each at a discount of 10% redeemable at a premium of 5% after 5 years. According to the terms of issue Rs.500 was payable on application and the balance amount on allotment of debentures. Record necessary entries regarding issue of 10% Debentures.

Q18. Footfall Ltd. issues 10,000 Debentures of Rs.100 each at a discount of 10% redeemable at a premium of 5% after the expiry of three years. Pass Journal entries for issue of debentures.

Q19. Pass necessary Journal entries for the issue of debentures in the following cases:
(a) Rs.40,000; 12% debentures of Rs.100 each issued at a premium of 5% redeemable at par.
(b) Rs.70,000; 12% debentures of Rs.100 each issued at a premium of 5% redeemable at 110.

Q20. Best Barcode Ltd. took a loan of Rs.5.00,000 from a bank giving Rs.6,00.000; 9% Debentures as collateral security. Pass Journal entries regarding issue of debentures, if any, and show this loan in the Balance Sheet of the company.

INFORMATICS PRACTICES (065)

Q1. Write SQL commands for the questions from (i) to (xii) and write output(s) from (xiii) to (xv) based on the following table DEPARTMENT.

AdmNo	Name	Address	Join_Date	Fee	Semester	Grade
1256	Aditya	B-4, Dwarka, Mumbai	2016-07-23	45000	I	A1
5678	Amit	Sec 5, R.K.Puram	2015-06-15	35000	III	B2
1425	Karina	B3/2, V.Vihar, Patna	2013-06-22	26000	II	C1
8954	Bikram	Sec 2, Pune	2012-03-13	75000	I	A2
1789	Vijay	123/a, Mumbai	2014-02-17	35000	II	B1
8376	Ganesh	53/2, Chandigarh	2012-10-05	0	II	C3
2938	Bharath	11/7, Chennai	2012-06-24	25000	II	B2
6498	Tarun	117-n, Delhi	2016-05-25	32000	I	A1
5420	Rajan	56-e, Ahemadabad	2014-02-27	32000	III	B2
8567	Anita	73/c, Faridabad	2012-08-22	38000	I	C2

i. Display all the details.

ii. Display Admission Number and Name of the students.

iii. Display the all the details of C1 grade students.

iv. Display the Name and Join Date of all the students who have got A1 grades.

v. Display the Name and Fees of all the students who are studying in Semester I and III.

vi. Display the details of all students who have paid fees more than Rs.35,000.

vii. Display the admission no., name and address of all the students who have paid the fees less than Rs.30,000.

viii. Display the details of students who have paid the fees in the range Rs.30,000 – Rs.40,000 (Both values inclusive).

ix. Display the name and address of all the students who have paid the fees in the range Rs.25,000 – Rs.35,000 (Both values exclusive).

x. Display the details of the students whose have not paid any fees.

xi. Display the details of all scholars whose date of join is before 30/June/2012.

xii. Display the Name. Fee and Grade of the student with the admission number 1425.

xiii. SELECT ADMNO, NAME FROM DEPARTMENT WHERE FEES > 40000;

xiv. SELECT NAME, JOIN_DATE FROM DEPARTMENT WHERE JOIN_DATE >= '2016-01-01';

xv. SELECT * FROM DEPARTMENT WHERE GRADE IN ('B2', 'C1');

PHYSICAL EDUCATION (048)

Write a Practical manual on Volleyball/ Basketball/ Handball with colored picture in your practical book according to CBSE board External practical 2024-25 (Refer the pdf file which was shared)
***Record File shall include:
- ➢ Practical-1: Fitness tests administration. (SAI Khelo India Test)
- ➢ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.
- ➢ Practical-3: * Anyone IOA recognized Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills.
  1. **Cover it with Red color paper**
  2. Label it with all the details with plain white stickers (refer previous year practical manual)
  3. Stick pictures on blank pages only
  4. Detail index should be there

APPLIED MATHEMATICS (241)

Numbers, Quantification and Numerical Applications, Numerical Inequality, Matrices

Q1. Find $7^6 (mod 3)$.

Q2. If $x \ (mod \ 9) = 2$, find all the possible values of x; where $0 < x < 47$.

Q3. The average salary per head of the entire staff of a small factory including the supervisor and labours is Rs. 5750. The average salary per head of the supervisor is RS. 20,000 and that of the labours is 5000. Find the number of labours in the factory if there are 4 supervisors.

Q4. A container has 50 l of juice in it. 5 l of juice is taken out and is replaced by 5 l of water. This process is repeated 4 more times. What is the amount of juice in the container after final replacement?

Q5. A boat goes 8 km upstream and then returns. Total time taken is 4 hours 16 minutes. If the speed of current is 1 km/hr, find the actual speed of the boat.

Q6. A man can row 7½ km/h in still water. If in a river running at 1.5 km an hour, it takes him 50 minutes to row to a place and back, how far off is the place?

Q7. A cistern can be filled in 8 hours but due to a leakage in its bottom, it takes 2 hours more to fill the tank. If the cistern is full, how much time will the leakage take to empty it?

Q8. Two pipes A and B can fill a tank in 24 minutes and 32 minutes respectively. If both the pipes are opened simultaneously, after how much time B should be closed so that the tank is full in 18 minutes?

Q9. In a 1000 metres race, A can give a start of 100 metres to B and a start of 280 metres to C. In the same race, how much start can B give to C?

Q10. A team played 40 games in a season and lost in 16 of them. What percent of games played did the team win?

Q11. Show that the numbers 16 and 4, satisfy the numerical inequality AM ≥ GM.

Q12. Prove that the following inequality holds true: $\sqrt{5} + \sqrt{3} > \sqrt{6} + \sqrt{2}$.

Q13. Satyarth and Swarit are brothers, Satyarth owns a house which is worth Rs. 3 crore and Swarit owns a farmhouse which is worth Rs. 2.75 crores. But Satyarth has a debt of Rs. 55 lakhs, if they both sell their properties then which of the following statement(s) holds true to represent the above data mathematically:
a) Satyarth's net worth is more than Swarit's net worth.
b) Swarit's net worth is more than Satyarth's net worth.
c) $2.55 < 2.75$

Q14. Insert the appropriate sign of inequality:
$\sqrt{3}(\sqrt{50} - \sqrt{32})$ _____ $3\sqrt{54} + 2\sqrt{24}$.

Q15. Construct matrix $A = [a_{ij}]$ of order 2 x 3 where $a_{ij} = \frac{(i+j)^2}{2}$

Q16. A matrix has 14 elements. How many matrices of different orders are possible?

Q17. How many distinct 2 x 2 matrices can be formed by using numbers 5, 7 and -1? Justify your answer.

Q18. A matrix has 14 elements. How many matrices of different orders are possible?

Q19. Identify the type of matrices given below and write the order of each matrix: A= [2 3]

Q20. For the matrices A and B, such that AB=BA, if $A = \begin{bmatrix} 4 & 0 \\ 2k & 5k \end{bmatrix}$ and $B = \begin{bmatrix} k & o \\ 3 & -1 \end{bmatrix}$.
Then show that, $2k^2 + 17k - 12 = 0$.

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