

#### PARSHVANATH CHARITABLE TRUST'S

### A.P. SHAH INSTITUTE OF TECHNOLOGY

Semester: DS GT Academic Year: 20,72-2028
ex. (1) In an examination, there were two papers A and B 900 students appeared tex the exa- mination Exactly 740 and 660 passed in paper A and B respectively 640 passed in both Find the no of students who failed in both
papers
n(s) = 900   5 A
n(A) = 740 (100 (649 20)
n(B) = 660
n(ANB) = 640
The number of students who passed in either A or B or both.  n (AUB) = n(A) + n(B) - n(ANB)  = 740 + 660 - 640  = 766  The no-of students who failed in
n(AUB) = n(s) - n(AUB)
= 900 - 760
= 140



Subject Incharge:

### PARSHVANATH CHARITABLE TRUETS

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Department of Computer Science and Engineering
Data Science

Semester: Subject: D.S.Cr.T Academic Year: 2022-2023
ex. 2) In a group of 300 persons 160 drink
tea and 170 dynk coffee 80 of them
drink both How many persons do nor
drink either?
n(s) = the no. of persons surveyed = 300
n(A) = the no. of persons who drink tea = 16
- 1100 = 170
n(AnB) = the no of persons who drink
both = 80
who drink either tea or A
who drink either tea or
coffee or both. (80 80 90)
n(AUB)=n(A)+n(B)-n(AnB) 50
= 160+170-80
the no of persons who do not drink either
n(AUB) = n(s) - n (AUB)
= 300-250
= 50

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### PARSIVANATH CHARTARLE TRUST'S

## A.P. SHAH INSTITUTE OF TECHNOLOGY

Semester: DS GT Academic Year: 2002-202-3
(3) In a class of 25 students of Economics
2 Students have taken
Economics Out of these & have taken
Economics but not politics find the
no of students who have taken Economics
Politics but not Economics
⇒ Ecoromics
the have,
n(s) = no of students in class = 25
n(E) = no of students who have Economics=12
n(P) = no of students who have taken
Politics but not Economics
+ n(s) - n(E) = 1
= 25 - 12
= 13
M(E-P)= no of students have taken
Economics and but not politics
= m(Enp) = 8 given
n(E-P) = n(E) -n(EnP)
8 = 12-N(EUb)
$n(E \cap P) = 12 - 8$
= 4
no of students have taken (8 4) 13)
Economics but not and
Politics = 4. S=25
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### PARSHWANATH CHARITABLE TRUST'S

# A.P. SHAH INSTITUTE OF TECHNOLOGY

Semester SubjectDS(rT Academic Year: 2022-2023
ex. (3) In a town there are 2000 literate persons 60% of them read newspaper A. 55% of them read newspaper B. and 20% read newspaper neither A nor B. How many
persons read it both the newspapers A&B?
5=100 \$
(et n(s)=no.of  persons=100  n(A)= / of persons  who read A = 60  n(B)= / of persons  who read B = 55  n(A)B) = n(A)B) = no.of persons neith  = 20  n(A)B) = / of persons read either A or B or bot
n(AUB)=n(s)-n(AUB)
= 100 - 20
= 80  Now we find 1. of persons who read bo  n(AUB) = n(A) + n(B) - n(A)B)
S n(AUB) = n(A) + n(B) - n(ANB)
put Values 80 = 60 + 55 - n(ANB)
n(ANB) = 60 + 55 - 80 = 35
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Subject Incharge:

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Semester TI	Subject :DS	GT_	Academic Year: 20	22: 202.3
The perce	ntage (1)	of person	s who r	ead
n(A-B) =	OCAOB	)		
	= n(A)-1			
	= 60-35			10:37
n(B-A)	ons who	read B	only.	20
	= n(B) -		NEW MINE	
7. of perso n(A-B)		ead only = 25 + = 45		
> Number	of persons	who re	ead bot	h
= 2000×	35 = 7	-00		
> Number	of perso	odes en	read on	ly one
= 2000	×45	900.		
	100			
CHO	on Terror	DOMESTIC OF STREET	VIII TOTAL	antin C
	DARMAIN	DE THE		
	30 - 50	Marie and	in The	
	BARRIE TO A		Time I	
TANKE TO SEE				

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ex. 5) In a class of 60 students, 30 students got first class in sem I exam and 25 got first class in sem II If 20 students
- got first class in sem T exam and 25
got first class in som TI Tf 20 student
did not get first class in either exam
How many got first class in both exam?
n(s) = 60 - ma at shidante :- 1-1
n(A) = no. of students got first class
in sem I = 30
n(B) = no. of shidents and fint class
in sem II = 25
-m(AUB) = m(AAB)
= no. of students did not get
first class
= 20
. No of students got first class in in either
No of students got first class in in either sen or sem mor both.
n(AUB) = n(s) - n(AUB)
= 60 - 20
= 40
n(AUB) = n(A) + n(B) - n(ADB)
40 = 30+25-n(ANB)
n(ANB) = 30+25-40 =15
no of students got first class in both
exam = 15
GIGIT > 15 .
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#### PARSIFVAMATO CHARITABLE TRUST'S

### A.P. SHAH INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering
Data Science

Semester: Subject DS CrT Academic Year: 2022-2023
ex. 6 Among 50 students in a class, 26 got A in the exam and 21 got A in the
the students and not
got an A in either exam, how many students got A in both exam?
n(s) = 50 = no of students in class
m(A) = mo. of students got A = 26
n(B) = no of students got A in
many = man = 21
n(AUB) = ncAnB) - no of students  did not get A in either exam
= 17
n(AUB) = n(s) - n(AUB) (12 (14) 7)
= 33
no. of students got A in either or both exan
no of students got A in both exam n(AUB) = n(A) +n(B) - n(ANB)
n(AUB) = n(A) + n(B) - n(ANB)
33 = 26 + 21 - n(ANB)
m(ANB) = 26+21-33
=14

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### PARSICVANATH CHARITABLE TRUST'S

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Semester:	Subject : DSC	rT_	Academic Year: 2022-202
ex. (7) In a c	class 42	1. stude	us passed in
Maths, 45%	in Phus	ics . 412	of passey
- Chemistry,	6-1. passi	ed in M	arns a light
19% passed	in Phy.	& Chem	18% In Cher
and Maths	Find no	. of ste	deuts who
passed in a	U 3 sub	jeck, it	there were
-260 studen	ts in a	class &	15% students
gailed in	all subje	ets.	
=> 1. of	, ,		Laure GERAL
n(s)=no of s	tudents in	class =	10.0
n(M) = 1. of s	tudents po	ussed in	Maths = 42
n(p) = 1. of	students ,	passed in	Physics = 45
n(c) = 1 of s	tudents po	used in	Chemistry = 41
n(MNP) = / 01		passed i	u wath &
	cs = 16		
n(Mnc)= 1.00f		possed in	maths &
Chemis	stry - 181	200	
m(PU m(Pnc) =	Z of sh	udents po	ussed in Physics
/ Keni	emisty = 19		
(mUPUC) = x			failed in
all	subjects =	15	
MA OF SHIDOWH	passad	16 40	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
no of students	pessed	In all su	bjects
n(mupuc)= 7	Market and the second s	m upuc)	
	100-15		
#3	85		
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Semester: TIT

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### A.P. SHAH INSTITUTE OF TECHNOLOGY

Subject \_\_DSGT

Department of Computer Science and Engineering Data Science

Academic Year: 2022-2023

Maths

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m(muguc) = m(m) + n(p) + n	(1) - n(map)
n(mnc) - n(pnc) + n	
85 = 42+45+41-16	
m(mnpnc) = 42+45+41-1	
= 85-42-45-	
= 10	
	A San
Number of students passed	in all subjects
= 260 X 10	
100	M P S
= 26	18/6 20
	(809)
	19
	6 3
	2 20 1
X. (8) Out of 250 students wh	o tailed in an exam.
It was found that 128 failed	in Maths, & + fauled
in Physics, 134 in Applied Med	chances, 31 tayled in
Mashs & Phy , 54 failed in App	hed Mechanics and
Maths, 30 Pailed in Applied Me	chanies & physics.
Find how many candidates	failed in 17 au
the three subjects, if I in M	arus but not in ring
in applied Mechanics but	Mechanice nov in
107 IV bud por not in wholes	Maths

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Department of Computer Science and Engineering Data Science

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Semester: Subject: D_S.GTAcademic results
ex. (3) In an university, it was found that, 60% o
the professors play tennis, 50% of them play
cricket, 70% of them play football, 20% of
them play tennis and cricket, 30 % play
tennis and football, 40 / play cricket of
tootball. If someone claimed that 20% of
the professors play tennis, & cricket and
also football, would you accept this claim?
Justify your gnewer?
n(T) = no of professors play tennis = 60
n(c) = play cricket = 50
n(+) = play football = 70
$n(\uparrow \cap c) = 20$
D(LU+)=30
m(cn+)= 40
n(Thch+)=20
n(TUCUF) = n(T) + n(C) + n(F) - n(TOF)
-n(cnf)-n(Tnc)+n(Tncnf)
= 60+50+70-20-30-40+20
=110
The claim is not acceptable as given.
total should be 100.

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