

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International Advanced Subsidiary and Advanced Level

MARK SCHEME for the March 2016 series

9713 APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/02

Paper 2 (Practical Test A), maximum raw mark 120

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Evidence document

Q2

	A	B	C	D
1	Payroll number	Forename	Surname	Branch code
2	AhmM20002	Indravadan	Goswami	=LEFT(A2,3)
3	CheT20004	Zohar	Parikh	=LEFT(A3,3)
4	KanT10006	Hari	Mehta	=LEFT(A4,3)
5	GhaT10003	Raktavira	Rao	=LEFT(A5,3)
6	IndT30002	Ashoka	Beniwal	=LEFT(A6,3)
7	BanS30014	Amma	Harjo	=LEFT(A7,3)
8	CheS30006	Mithra	Saha	=LEFT(A8,3)
9	IndT10020	Joshua	Parsa	=LEFT(A9,3)
10	KanM10018	Mandar	Kale	=LEFT(A10,3)

Header:

Name and numbers on right 1 mark

Branch code:

LEFT() MID() 1 mark
 Correct relative reference to A2 1 mark
 ,3 ,1,3 1 mark
 Replication 1 mark

Q3

	A	B	C	D	E
1	Payroll number	Forename	Surname	Branch code	Pay grade
2	AhmM20002	Indravadan	Goswami	=LEFT(A2,3)	=MID(A2,4,2)
3	CheT20004	Zohar	Parikh	=LEFT(A3,3)	=MID(A3,4,2)
4	KanT10006	Hari	Mehta	=LEFT(A4,3)	=MID(A4,4,2)
5	GhaT10003	Raktavira	Rao	=LEFT(A5,3)	=MID(A5,4,2)
6	IndT30002	Ashoka	Beniwal	=LEFT(A6,3)	=MID(A6,4,2)
7	BanS30014	Amma	Harjo	=LEFT(A7,3)	=MID(A7,4,2)
8	CheS30006	Mithra	Saha	=LEFT(A8,3)	=MID(A8,4,2)
9	IndT10020	Joshua	Parsa	=LEFT(A9,3)	=MID(A9,4,2)
10	KanM10018	Mandar	Kale	=LEFT(A10,3)	=MID(A10,4,2)

Pay grade:

MID() 1 mark
 Correct relative reference to A2 1 mark
 ,4 1 mark
 ,2 1 mark
 Replication 1 mark

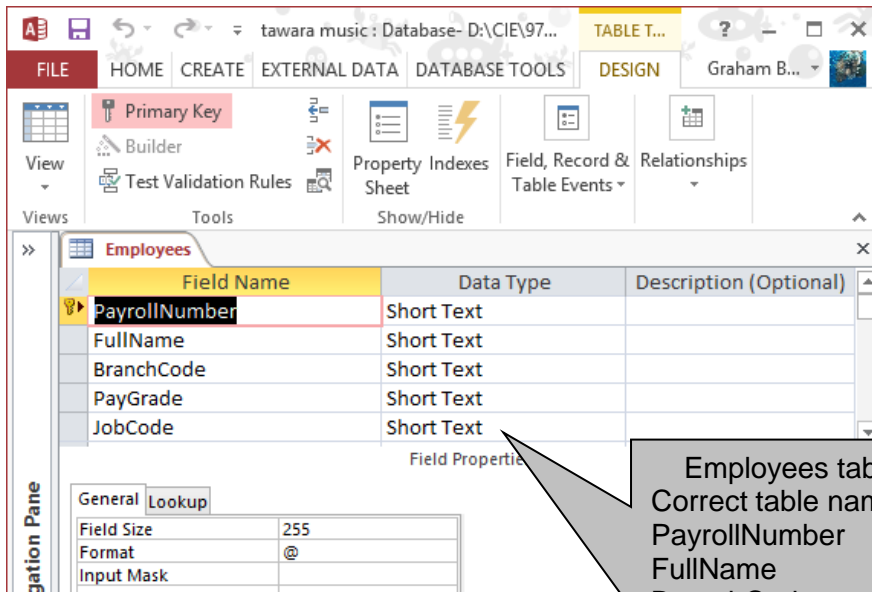
Q5

	A	B	C	D
1	Payroll number	Full name	Forename	Surname
2	AhmM20002	=D2&" "&C2	Indravadan	Goswami
3	CheT20004	=D3&" "&C3	Zohar	Parikh
4	KanT10006	=D4&" "&C4	Hari	Mehta
5	GhaT10003	=D5&" "&C5	Raktavira	Rao
6	IndT30002	=D6&" "&C6	Ashoka	Beniwal
7	BanS30014	=D7&" "&C7	Amma	Harjo
8	CheS30006	=D8&" "&C8	Mithra	Saha
9	IndT10020	=D9&" "&C9	Joshua	Parsa
10	KanM10018	=D10&" "&C10	Mandar	Kale

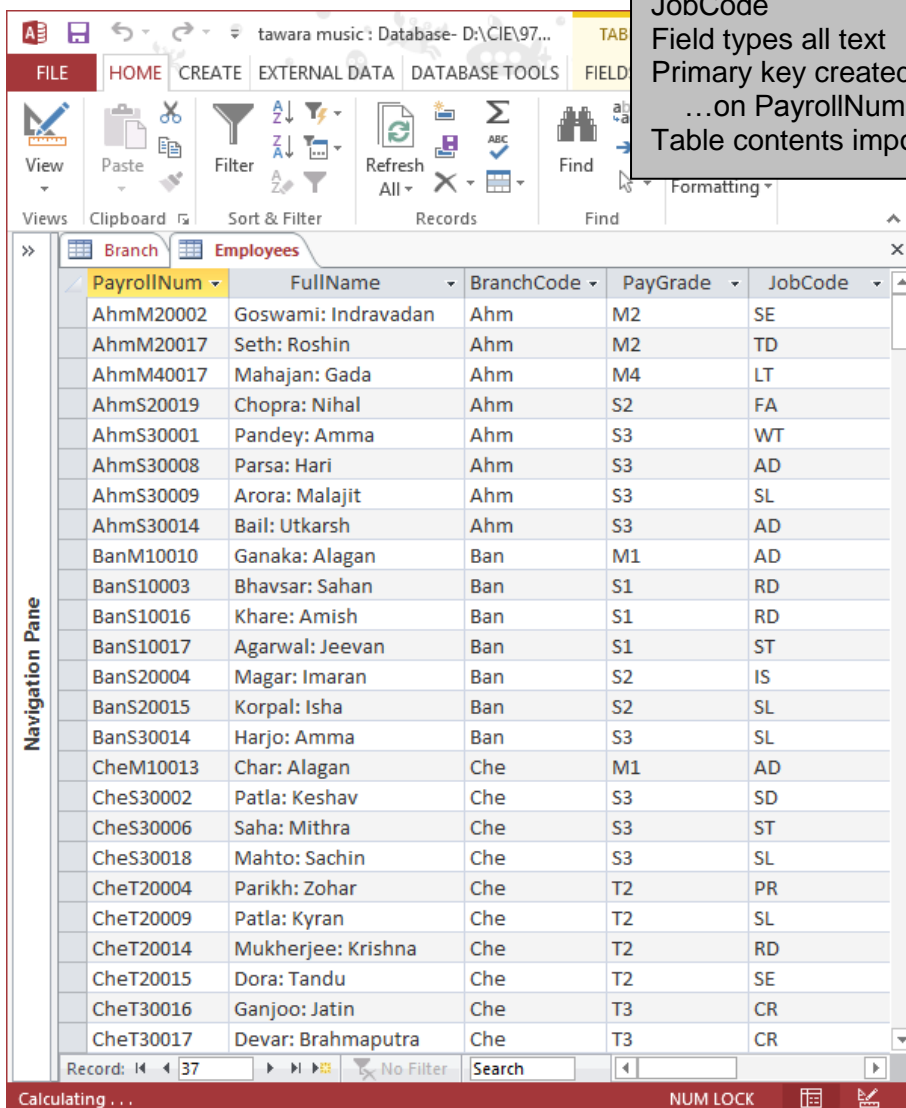
Full name:

New column B inserted 1 mark
 B1 contains **Full name** 1 mark
 D2 or Concatenate 1 mark
 & D2 1 mark
 ". " , 1 mark
 & ". " 1 mark
 C2 ,C2 1 mark
 Replication 1 mark

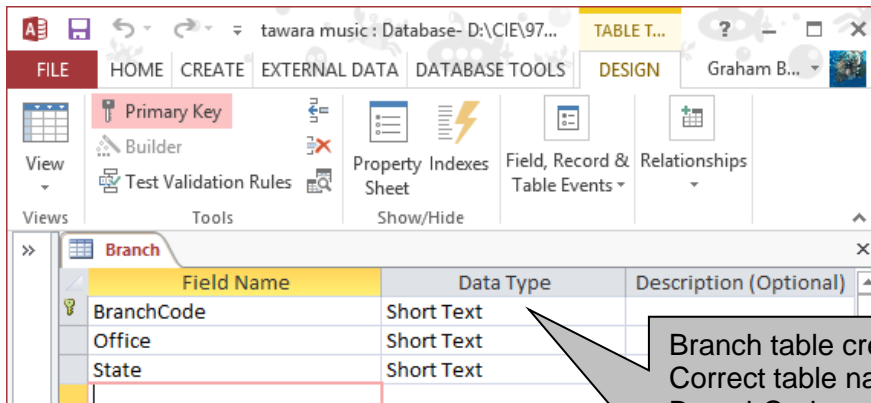
Q6



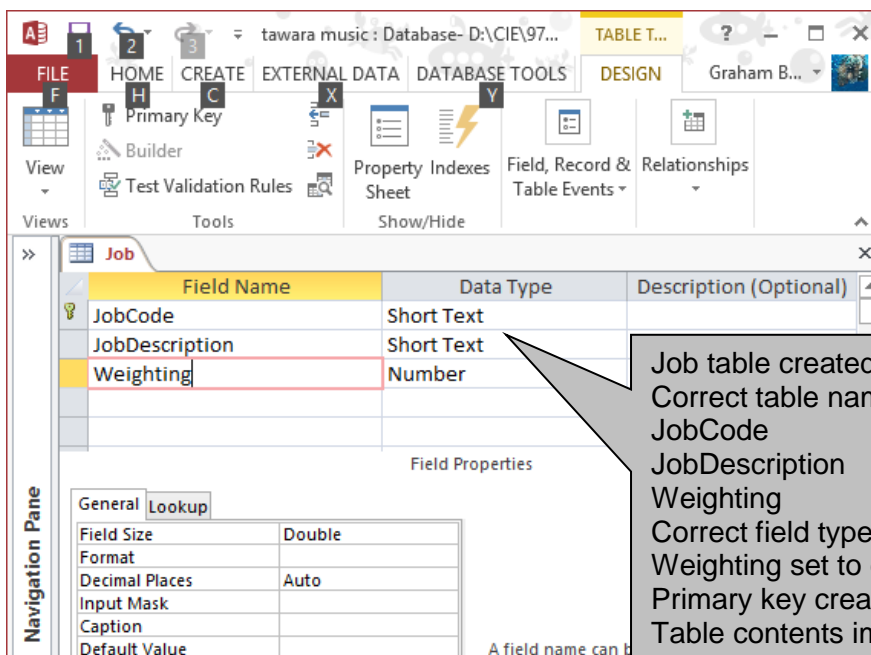
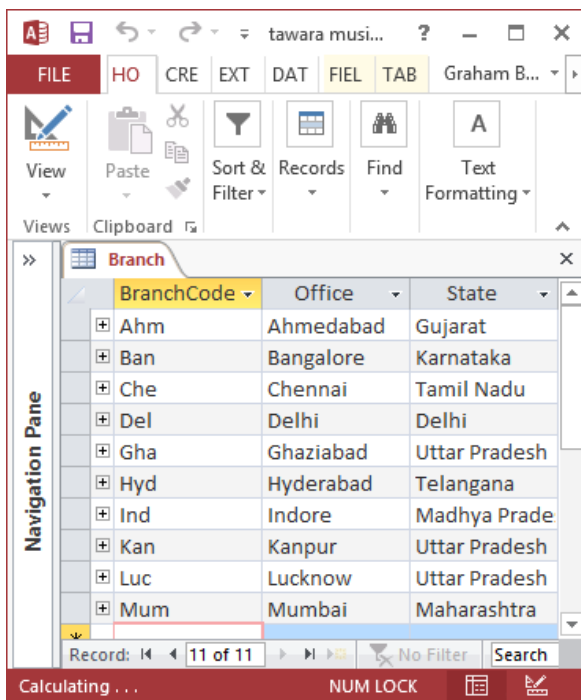
Employees table created
 Correct table name 1 mark
 PayrollNumber 1 mark
 FullName 1 mark
 BranchCode 1 mark
 PayGrade 1 mark
 JobCode 1 mark
 Field types all text 1 mark
 Primary key created 1 mark
 ...on PayrollNumber field 1 mark
 Table contents imported 1 mark



Q7



Branch table created
 Correct table name 1 mark
 BranchCode 1 mark
 Office 1 mark
 State 1 mark
 Field types all text 1 mark
 Primary key created 1 mark
 ...on BranchCode field 1 mark
 Table contents imported 1 mark



Job table created
 Correct table name 1 mark
 JobCode 1 mark
 JobDescription 1 mark
 Weighting 1 mark
 Correct field types 1 mark
 Weighting set to decimal value 1 mark
 Primary key created on JobCode field 1 mark
 Table contents imported 1 mark

JobCode	JobDescription	Weighting
AD	Admin/clerical	1
CR	Tours/Promotions crew	1
FA	Finance assistant	0.9
FD	Finance director	1.2
HD	Human resources director	1
HR	Human resources	1
IA	IT system analyst	1.2
IC	IT consultant	0.8
IM	IT systems manager	1.1
IS	IT systems	1
LT	Lighting technician	1
MD	Managing director	2
OM	Office manager	0.9
PM	Publishing manager	1
PR	Programmer	1
RD	Regional director	1
SD	Sales director	0.8
SE	Sound engineer	1
SL	Sales	1
SM	Studio manager	0.9
ST	Studio technician	1.1
TD	Tours/Promotions director	1
TS	Recruitment/Talent Scout	0.85
WD	Web designer	1
WT	Web technician	1

Field Name	Data Type	Description (Optional)
PayGrade	Short Text	
Rate	Currency	

Property	Value
Format	Decimal Places: 2
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	

- PayGrade table created 1 mark
- Correct table name 1 mark
- PayGrade 1 mark
- Rate 1 mark
- Correct field types 1 mark
- Rate set to currency with 2dp 1 mark
- Primary key created on PayGrade field 1 mark
- Table contents imported 1 mark

PayGrade	Rate
M1	₹ 7,25,000.00
M2	₹ 6,40,000.00
M3	₹ 5,00,600.00
M4	₹ 9,00,000.00
S1	₹ 3,00,000.00
S2	₹ 2,50,900.00
S3	₹ 2,25,080.00
T1	₹ 6,60,600.00
T2	₹ 5,00,000.00
T3	₹ 4,50,000.00

Q8

Field Name	Data Type
PayrollNumber	Short Text
FullName	Short Text
BranchCode	Short Text
PayGrade	Short Text
JobCode	Short Text

Field Properties for PayGrade:

Field Size	2
Format	@
Input Mask	L9
Caption	
Default Value	

Correct table and field 1 mark
 Field length 2 characters 1 mark
 Input mask set to L9 or correct validation 1 mark

Field Name	Data Type	Description (Optional)
PayGrade	Short Text	
Rate	Currency	

Field Properties for PayGrade:

Field Size	2
Format	
Input Mask	L9
Caption	
Default Value	

Correct table, field set 2 characters and mask of L9 1 mark

Q9

Edit Relationships

Table/Query: Branch Related Table/Query: Employees

BranchCode BranchCode

Enforce Referential Integrity

Cascade Update Related Fields

Cascade Delete Related Records

Relationship Type: One-To-Many

Correct fields 2 marks
 One-to-many 1 mark

Edit Relationships

Table/Query: Job Related Table/Query: Employees

JobCode JobCode

Enforce Referential Integrity

Cascade Update Related Fields

Cascade Delete Related Records

Relationship Type: One-To-Many

Correct fields 2 marks
 One-to-many 1 mark

Edit Relationships

Table/Query: PayGrade Related Table/Query: Employees

PayGrade PayGrade

Enforce Referential Integrity

Cascade Update Related Fields

Cascade Delete Related Records

Relationship Type: One-To-Many

Correct fields 2 marks
 One-to-many 1 mark

Q10

Added field:
Contact
Text field type

1 mark
1 mark

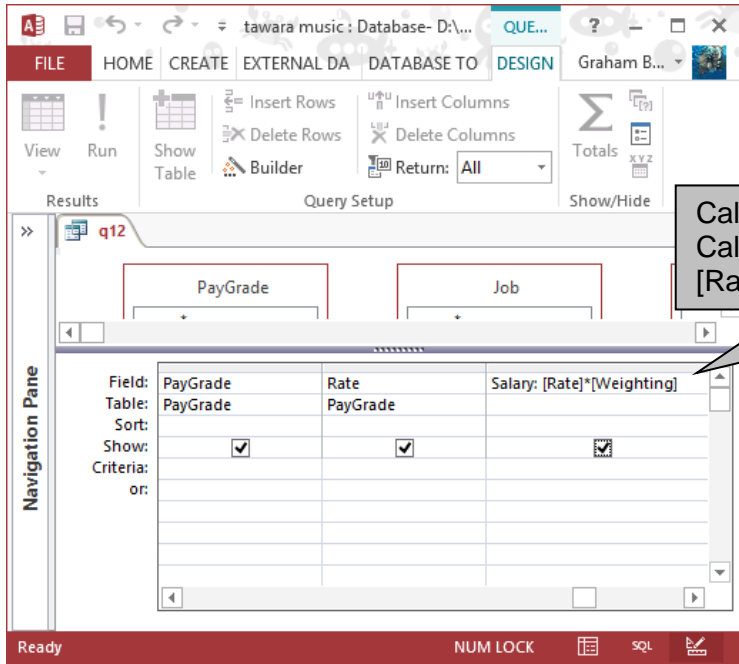
Field Name	Data Type
BranchCode	Short Text
Office	Short Text
State	Short Text
Contact	Short Text

Branch Table:
Correct telephone numbers added

2 marks

BranchCode	Office	State	Contact
Ahm	Ahmedabad	Gujarat	07912341234
Ban	Bangalore	Karnataka	08055556666
Che	Chennai	Tamil Nadu	04422224444
Del	Delhi	Delhi	01142424242
Gha	Ghaziabad	Uttar Pradesh	01204736200
Hyd	Hyderabad	Telangana	04004004004
Ind	Indore	Madhya Prade	07311234567
Kan	Kanpur	Uttar Pradesh	05121234567
Luc	Lucknow	Uttar Pradesh	05221234567
Mum	Mumbai	Maharashtra	02266666666

Q12

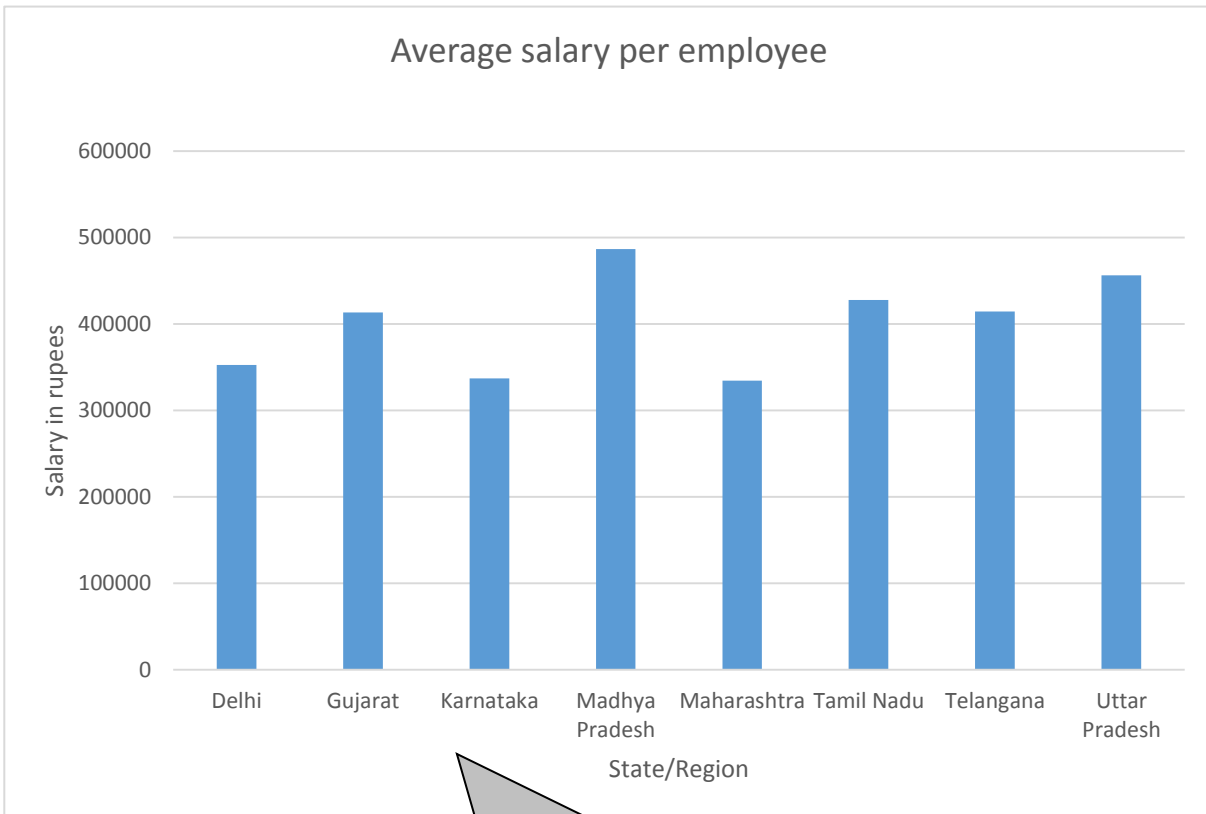


Calculated field:
Called Salary
[Rate]*[Weighting] 1 mark
2 marks

PayrollNum	FullName	JobCode	JobDescription	Weighting	PayGrade	Rate	Salary
AhmM20002	Goswami: Indravadan	SE	Sound engineer	1	M2	₹ 6,40,000.00	₹ 6,40,000.00
AhmM20017	Seth: Roshin	TD	Tours/Promotions director	1	M2	₹ 6,40,000.00	₹ 6,40,000.00
AhmM40017	Mahajan: Gada	LT	Lighting technician	1	M4	₹ 9,00,000.00	₹ 9,00,000.00
AhmS20019	Chopra: Nihal	FA	Finance assistant	0.9	S2	₹ 2,50,900.00	₹ 2,25,810.00
AhmS30001	Pandey: Amma	WT	Web technician	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
AhmS30008	Parsa: Hari	AD	Admin/clerical	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
AhmS30009	Arora: Malajit	SL	Sales	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
AhmS30014	Bail: Utkarsh	AD	Admin/clerical	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
BanM10010	Ganaka: Alagan	AD	Admin/clerical	1	M1	₹ 7,25,000.00	₹ 7,25,000.00
BanS10003	Bhavsar: Sahan	RD	Regional director	1	M1	₹ 7,25,000.00	₹ 7,25,000.00
BanS10016	Khare: Amish	ST	Studio technician	1.1	S3	₹ 2,25,080.00	₹ 2,47,588.00
BanS10017	Agarwal: Jeevan	ST	Studio technician	1.1	S3	₹ 2,25,080.00	₹ 2,47,588.00
BanS20004	Magar: Imaran	IS	IT specialist	1	S2	₹ 2,50,900.00	₹ 2,25,810.00
BanS20015	Korpai: Isha	SL	Sales	1	S2	₹ 2,50,900.00	₹ 2,25,810.00
BanS30014	Harjo: Amma	SL	Sales	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
CheM10013	Char: Alagan	AD	Admin/clerical	1	M1	₹ 7,25,000.00	₹ 7,25,000.00
CheS30002	Patla: Keshav	SD	Sales director	0.8	S3	₹ 2,25,080.00	₹ 1,80,064.00
CheS30006	Saha: Mithra	ST	Studio technician	1.1	S3	₹ 2,25,080.00	₹ 2,47,588.00
CheS30018	Mahto: Sachin	SL	Sales	1	S3	₹ 2,25,080.00	₹ 2,25,080.00
CheT20004	Parikh: Zohar	PR	Programmer	1	T2	₹ 5,00,000.00	₹ 5,00,000.00
CheT20009	Patla: Kyran	SL	Sales	1	T2	₹ 5,00,000.00	₹ 5,00,000.00
CheT20014	Mukherjee: Krishna	RD	Regional director	1	T2	₹ 5,00,000.00	₹ 5,00,000.00
CheT20015	Dora: Tandu	SE	Sound engineer	1	T2	₹ 5,00,000.00	₹ 5,00,000.00
CheT30016	Ganjoo: Jatin	CR	Tours/Promotions crew	1	T3	₹ 4,50,000.00	₹ 4,50,000.00

Calculated field:
Salary set to rupees
Format to 2 dp 1 mark
1 mark

Q14



- | | |
|--|--------|
| Correct data | 1 mark |
| Bar chart | 1 mark |
| Appropriate title | 1 mark |
| State names fully visible | 1 mark |
| Appropriate value and category axis titles | 1 mark |

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A Candidate, ZZ999, 9999

Title in here

A Candidate ZZ999 9999

Bangalore
Karnataka
Tel: 08055556666

BanS10016	Khare: Amish	Studio Technician	S2	₹250900.00	1.1
BanS10017	Agarwal: Jeevan	Studio technician	S1	₹300000.00	1.1
BanS20015	Korpai: Isha	Sales	S2	₹250900.00	1
BanS30014	Harjo: Amma	Sales	S3	₹225080.00	1
BanS10003	Bhavsar: Sahan	Regional director	S1	₹300000.00	1
BanS20004	Magar: Imaran	IT systems	S2	₹250900.00	1
BanM10010	Ganaka: Alagan	Admin/clerical	M1	₹725000.00	1

Chennai
Tamil Nadu
Tel: 04422224444

CheT30016	Ganjoo: Jatin	Tours/Promotions crew	T3	₹450000.00	1
CheT30017	Devar: Abhmaputra	Tours/Promotions crew	T3	₹450000.00	1
CheS30006	Saha: M	Studio technician	S3	₹225080.00	1.1
CheT20015	Dora: T	and engineer	T2	₹500000.00	1

CheS30002	Search	Kamataka or Tamil Nadu			2 marks
CheS30018	Grouped ascending on Office				1 mark
CheT20009	...Sorted descending on Job_Description (within the group)				1 mark
CheT20014	Header:				
CheT20004		Appropriate title left aligned			1 mark
CheM1001		Candidate details right aligned & below			1 mark
		Header – White sans-serif font			1 mark
		Dark grey background			1 mark
	Group header:				
		Light grey background			1 mark
		16 pt bold, sans-serif font			1 mark
	Fields:	Office, State, Contact present			1 mark
		Vertically aligned			1 mark
		Correct field order			1 mark
		Text Tel: before contact field			1 mark
		Field names not visible			1 mark
	Detail rows:				
	Fields:	Payroll number, name, job description, pay grade, rate and weighting			2 marks
		Correct order of fields			1 mark
		Rupees: symbol (1) and 2dp (1)			2 marks
	Printout	Greyscale, single page wide & fully visible			1 mark

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Header: Top line: Confidential Managers only	1 mark
Second line: Appropriate title	1 mark
Third line Report presented by: Candidate details right aligned and below	1 mark

Confidential: Managers only

Summary data for employees in each state

Report presented by: A Candidate ZZ999 9999

State	Office	Contact	FullName	PayGrade	JobDescription	Salary
Delhi						
	Delhi	01142424				
			Gandhi: Padm	M1	Admin/clerical	₹725000.00
			Mishra: Anoushka	M2	Sales	₹640000.00
			Bhat: Brahmaputra	S1	Admin/clerical	₹300000.00
			Goswami:	S1	Recruitment/Talent Scout	₹255000.00
			Bhat: Subhan	S3	Tours/Promotions crew	₹225080.00
			Khare: Chakra	S3	Admin/clerical	₹225080.00
			Mishra: Krishna	S3	Lighting technician	₹225080.00
			Verma: Mandar	S3	Admin/clerical	₹225080.00

Summary for 'State' = Delhi (8 detail records)

Total salary	₹2820320.00
Average salary	₹352540.00
Minimum salary	₹225080.00
Maximum salary	₹725000.00

Gujarat

Primary grouping ascending by state	1 mark	
Secondary grouping by ascending on Office	1 mark	₹640000.00
Contact details present in Office group header	2 marks	₹640000.00
...Sorted ascending on PayGrade (within the group)	1 mark	₹900000.00
...Then on ascending on FullName	1 mark	₹225810.00
Detail rows:		₹225080.00
Fields: FullName, PayGrade, JobDescription, Salary	2 mark	₹225080.00
Correct order of fields	1 mark	₹225080.00
Rupees: symbol (1) and 2dp (1)	2 marks	₹225080.00
		₹225080.00

Summary for 'State' = Gujarat (8 detail records)

Total salary	₹3306130.00
Average salary	₹413266.25
Minimum salary	₹225080.00
Maximum salary	₹900000.00

Karnataka

Bangalore	08055556					
			Ganaka: Alagan	M1	Admin/clerical	₹725000.00
			Agarwal: Jeevan	S1	Studio technician	₹330000.00

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A Candidate, ZZ999, 9999

State	Office	Contact	FullName	PayGrade	JobDescription	Salary
			Bhavsar: Sahan	S1	Regional director	₹300000.00
			Khare: Amish	S2	Studio technician	₹275990.00
			Korpai: Isha	S2	Sales	₹250900.00
			Magar: Imaran	S2	IT systems	₹250900.00
			Harjo: Amma	S3	Sales	₹225080.00

Summary for 'State' = Karnataka (7 detail records)

Total salary	₹2357870.00
Average salary	₹336838.57
Minimum salary	₹225080.00
Maximum salary	₹725000.00

Madhya Pradesh

Indore

07

Shukla: Shudra M1 IT systems ₹725000.00

Summary data:

Fields:	4 correct summary calculations	4 marks	00.00
	Appropriate labels	1 mark	00.00
	Rupees: symbol and 2dp	1 mark	00.00
	Single page wide and fully visible	1 mark	00.00

Devar: Amish	S3	Admin/clerical	₹225080.00
Mukherjee: Roshin	S3	Studio technician	₹247588.00
Bail: Durvasas	T1	Tours/Promotions crew	₹660600.00
Dixit: Gokul	T1	Sales	₹660600.00
Ganjoo: Chakra	T1	Regional director	₹660600.00
Iyer: Sankalp	T1	IT systems	₹660600.00
Parsa: Josha	T1	IT consultant	₹528480.00
Beniwal: Ashoka	T3	Tours/Promotions crew	₹450000.00

Summary for 'State' = Madhya Pradesh (14 detail records)

Total salary	₹6812548.00
Average salary	₹486610.57
Minimum salary	₹225080.00
Maximum salary	₹725000.00

Maharashtra

Mumbai 02266666

Mitter: Dhruv	M1	Sales	₹725000
Srinivas: Jay	M1	Sales	₹725000
Malik: Bhagwandas	S1	Recruitment/Talent Scout	₹255000
Char: Drishti	S2	Sales	₹250900
Goswami: Ekadanta	S2	Regional director	₹250900

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A Candidate, ZZ999, 9999

State	Office	Contact	FullName	PayGrade	JobDescription	Salary
			Mukherjee: Ashvin	S2	Admin/clerical	₹250900
			Bhat: Indravadan	S3	Admin/clerical	₹225080
			Bhattacharya: Aaral	S3	Human resources director	₹225080
			Dayal: Alagan	S3	Admin/clerical	₹225080
			Dewangan: Zohar	S3	Web technician	₹225080
			Vaidya: Viraj	S3	IT systems manager	₹247588
			Bhat: Ina	T3	Studio manager	₹405000

Summary for 'State' = Maharashtra (12 detail records)

Total salary	₹4010608.00
Average salary	₹334217.33
Minimum salary	₹225080.00
Maximum salary	₹725000.00

Tamil Nadu

Chennai 04422224

Char: Alagan	M1	Admin/clerical	₹725000
Mahto: Sachin	S3	Sales	₹225080
Patla: Keshav	S3	Sales director	₹180064
Saha: Mithra	S3	Studio technician	₹247588
Dora: Tandu	T2	Sound engineer	₹500000
Mukherjee: Krishna	T2	Regional director	₹500000
Parikh: Zohar	T2	Programmer	₹500000
Patla: Kyran	T2	Sales	₹500000
Devar: Brahmaputra	T3	Tours/Promotions crew	₹450000
Ganjoo: Jatin	T3	Tours/Promotions crew	₹450000

Summary for 'State' = Tamil Nadu (10 detail records)

Total salary	₹4277732.00
Average salary	₹427773.20
Minimum salary	₹180064.00
Maximum salary	₹725000.00

Telangana

Hyderabad 04004004

Mishra: Durvasas	S2	Tours/Promotions crew	₹250900
Iyer: Tamish	S3	Tours/Promotions crew	₹225080
Mitter: Durvasas	T1	Sound engineer	₹660600
Chakpram: Nara	T2	Tours/Promotions crew	₹500000
Magar: Imaran	T2	Recruitment/Talent Scout	₹425000
Sehgal: Bhagwandas	T2	Recruitment/Talent Scout	₹425000

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A Candidate, ZZ999, 9999

State	Office	Contact	FullName	PayGrade	JobDescription	Salary
Summary for 'State' = Telangana (6 detail records)						
		Total salary			₹2486580.00	
		Average salary			₹414430.00	
		Minimum salary			₹225080.00	
		Maximum salary			₹660600.00	
Uttar Pradesh						
Ghaziabad 01204736						
			Parsa: Hari	M3	Office manager	₹450540
			Jha: Palash	S1	Admin/clerical	₹300000
			Mitter: Kiran	S2	IT systems	₹250900
			Salvi: Muskan	S2	Admin/clerical	₹250900
			Salvi: Viraj	S2	Admin/clerical	₹250900
			Nair: Kala	S3	IT systems	₹225080
			Bail: Kalima	T1	Managing director	₹1321200
			Menon: Durvasas	T1	Sound engineer	₹660600
			Rao: Raktavira	T1	IT systems	₹660600
			Soman: Bharat	T1	Programmer	₹660600
Kanpur 05121234						
			Kale: Mandar	M1	Sales	₹725000
			Sehgal: Ben	M1	Lighting technician	₹725000
			Kori: Imaran	M2	Sound engineer	₹640000
			Rampersad: Ashvin	S3	Admin/clerical	₹225080
			Dolma: Matsya	T1	Finance assistant	₹594540
			Mehta: Hari	T1	Sound engineer	₹660600
			Rampersad: Gada	T1	Web designer	₹660600
			Beniwal: Shiva	T2	Publishing manager	₹500000
			Bhattacharya: Arti	T2	Studio technician	₹550000
			Ahuja: Suhkan	T3	Admin/clerical	₹450000
			Matthai: Shesha	T3	Sound engineer	₹450000
			Tandon: Salim	T3	Web technician	₹450000
			Vasa: Bhavata	T3	Sales	₹450000
Lucknow 05221234						
			Kori: Javas	M1	Recruitment/Talent Scout	₹616250
			Char: Kintan	S1	Studio technician	₹330000
			Dayal: Yash	S1	Tours/Promotions crew	₹300000
			Negi: Drishti	S1	Admin/clerical	₹300000
			Rajagopal: Narain	S1	Tours/Promotions crew	₹300000

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A Candidate, ZZ999, 9999

State	Office	Contact	FullName	PayGrade	JobDescription	Salary
			Sehgal: Javas	S1	Tours/Promotions crew	₹300000
			Seth: Gokul	S1	Recruitment/Talent Scout	₹255000
			Bhattacharya: Achir	S2	Sound engineer	₹250900
			Vasa: Viraj	S2	Sales	₹250900
			Banerjee: Ishanvi	S3	Sales	₹225080
			Char: Kintan	S3	Admin/clerical	₹225080
			Dutta: Anshu	T2	Admin/clerical	₹500000

Summary for 'State' = Uttar Pradesh (35 detail records)

Total salary	₹15965350.00
Average salary	₹456152.86
Minimum salary	₹225080.00
Maximum salary	₹1321200.00