CONFIDENTIAL

The National Clinical Coding Examination [UK]

27 March 2018

Paper 1 Practical - ANSWERS
9:30 am - 12:35 pm
[THREE HOURS]

Please spend the first 5 minutes reading through the ‘Instructions to Candidates’

This Examination Paper consists of 2 Sections: A and B.

**Section A – Practical Coding [30% of the Marks]**
Answer all questions in the spaces provided on the Examination Paper.

**Section B – Case Studies [70% of the Marks]**
Case Studies 1-7.
Answer all questions using the Answer Sheets provided.
Write only on one side of the Answer Sheets provided.
Section A [1] 15%
Write your candidate number on EVERY page

ICD-10 codes are required for the first 15 questions [1 – 15]
[OPCS-4 codes are NOT required]

Provide appropriate code(s) for the following conditions in the boxes alongside each question. If more than one code is required, please use separate boxes for each code to make sequencing clear, for example, box 1 should contain the primary diagnosis code. [The number of boxes is not necessarily indicative of the codes required].

Question 1
Routine follow-up gastroscopy following surgery for a previous polyp of the stomach. No polyps seen but the patient had an oesophageal stricture that was dilated. [9 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>K22.2 Oesophageal obstruction</td>
<td>1</td>
</tr>
<tr>
<td>Z09.0 Follow-up examination after surgery for other conditions</td>
<td>2</td>
</tr>
<tr>
<td>Z87.1 Personal history of diseases of the digestive system</td>
<td>3</td>
</tr>
<tr>
<td>Index:</td>
<td></td>
</tr>
<tr>
<td>Stricture (see also Stenosis) R68.8</td>
<td></td>
</tr>
<tr>
<td>- esophagus K22.2</td>
<td></td>
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<tr>
<td>Tabular:</td>
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<tr>
<td>K22.2 Oesophageal obstruction</td>
<td></td>
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<tr>
<td>Index:</td>
<td></td>
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<tr>
<td>Examination (general) (routine) (of) (for) Z00.0</td>
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<tr>
<td>- follow-up (routine) (following) Z09.9</td>
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<tr>
<td>- - surgery NEC Z09.0</td>
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<tr>
<td>Z09.0 Follow-up examination after surgery for other conditions</td>
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<tr>
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<td></td>
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<tr>
<td>History (personal) (of)</td>
<td></td>
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<tr>
<td>- disease or disorder (of) Z87.8</td>
<td></td>
</tr>
<tr>
<td>- - digestive system Z87.1</td>
<td></td>
</tr>
</tbody>
</table>
Tabular:
Z87.1 Personal history of diseases of the digestive system

Question 2
Patient admitted with the fatty-acid metabolic disorder, Medium Chain Acyl CoA Dehydrogenase Deficiency. [3 Marks]

CODES AND TITLES
E71.3 Disorders of fatty-acid metabolism

Index:
Disorder (of) – see also Disease
- fatty acid metabolism E71.3
Or
Deficiency, deficient
- very long chain acyl-CoA dehydrogenase E71.3
Or
Very long chain acyl-CoA dehydrogenase deficiency E71.3

Tabular:
E71.3 Disorders of fatty-acid metabolism

Question 3
Patient admitted for treatment of pulmonary oedema. Known to have Sydenham’s chorea. [6 Marks]

CODES AND TITLES
J81.X Pulmonary oedema
I02.9 Rheumatic chorea without heart involvement

Index:
Oedema, oedematous – see Edema
Edema, edematous R60.9
- pulmonary – see Edema, lung
- lung (acute) J81

Tabular:
J81 Pulmonary oedema

Index:
Sydenham’s chorea – see Chorea, Sydenham’s
Chorea (gravis) (spasmodic) G25.5
- Sydenham’s I02.9
Tabular:
I02.9 Rheumatic chorea without heart involvement

Question 4
Patient admitted due to a deterioration in his paranoid schizophrenia. Clinician stated that the deterioration was exacerbated by underlying abuse of cocaine, amphetamines and cannabis. Patient smokes 20 cigarettes a day. [8 Marks]

CODES AND TITLES
F20.0 Paranoid schizophrenia
F19.1 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances – Harmful use
F17.1 Mental and behavioural disorders due to use of tobacco – Harmful use

Index:
Paranoid
- schizophrenia F20.0
Or
Schizophrenia, schizophrenic F20.9
- paranoid (type) F20.0

Tabular:
F20.0 Paranoid schizophrenia

Index:
Abuse
- psychoactive substance (specified NEC) F19.1

Tabular:
F19 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances .1 Harmful use

Index:
Abuse
- tobacco F17.1
Or
Tobacco (nicotine)
- harmful use F17.1
Tabular:
F17 Mental and behavioural disorders due to use of tobacco
.1 Harmful use

Question 5
Five year old child admitted with palpitations after
swallowing his mum’s citalopram and paracetamol at home.
The citalopram-induced palpitations were treated with
quinidine. [14 Marks]

CODES AND TITLES
T43.2 Other and unspecified antidepressants
X41.0 Accidental poisoning by and exposure to
antiepileptic, sedative-hypnotic, antiparkinsonism and
psychotropic drugs, not elsewhere classified – Home
T39.1 4-Aminophenol derivatives
X40.0 Accidental poisoning by and exposure to nonopioid
analgesics, antipyretics and antirheumatics – Home
R00.2 Palpitations

Index:
Substance Poisoning
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Accidental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citalopram</td>
<td>T43.2</td>
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</tbody>
</table>

Tabular:
T43.2 Other and unspecified antidepressants
X41 Accidental poisoning by and exposure to antiepileptic,
sedative-hypnotic, antiparkinsonism and psychotropic
drugs, not elsewhere classified
.0 Home

Index:
Substance Poisoning
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Accidental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paracetamol</td>
<td>T39.1</td>
</tr>
</tbody>
</table>

Tabular:
T39.1 4-Aminophenol derivatives
X40 Accidental poisoning by and exposure to nonopioid
analgesics, antipyretics and antirheumatics
.0 Home

Index:
Palpitations (heart) R00.2
Question 6

Millard-Gubler syndrome due to thrombotic cerebral infarction in the pre-cerebral basilar artery. [7 Marks]

CODES AND TITLES
I63.0 Cerebral infarction due to thrombosis of precerebral arteries
G46.3* Brain stem stroke syndrome (I60-I67†)

Index:
Infarct, infarction (of)
- cerebral (hemorrhagic) I63.9
- - due to
- - - thrombosis (hemorrhagic)
- - - - precerebral arteries I63.0

Tabular:
I63.0 Cerebral infarction due to thrombosis of precerebral arteries

Index:
Gubler-Millard paralysis or syndrome I67.9† G46.3*
Or
Millard-Gubler(-Foville) paralysis or syndrome I67.9† G46.3*

Tabular:
G46.3* Brain stem stroke syndrome (I60-I67†)

Question 7

Patient with a diagnosis of small plaque parapsoriasis. The patient is on medication for anxiety. [6 Marks]

CODES AND TITLES
L41.3 Small plaque parapsoriasis
F41.9 Anxiety disorder, unspecified

Index:
Parapsoriasis L41.9
- small plaque L41.3
### Tabular:
L41.3 Small plaque parapsoriasis

### Index:
Anxiety F41.9

### Tabular:
F41.9 Anxiety disorder, unspecified

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### Question 8

<table>
<thead>
<tr>
<th>Elderly patient admitted with an <em>E.coli</em> urinary tract infection causing reduced mobility. During the admission treatment was given for reduced mobility. [9 Marks]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. N39.0</td>
</tr>
<tr>
<td>2. B96.2</td>
</tr>
<tr>
<td>3. R26.8</td>
</tr>
<tr>
<td>4.</td>
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<tr>
<td>5.</td>
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<tr>
<td>6.</td>
</tr>
</tbody>
</table>

### CODES AND TITLES

| N39.0 Urinary tract infection, site not specified |
| B96.2 Escherichia coli [E. coli] as the cause of diseases classified to other chapters |
| R26.8 Other and unspecified abnormalities of gait and mobility |

### Index:

| Infection, infected (opportunistic) B99 |
| - urinary (tract) NEC N39.0 |

### Tabular:

| N39.0 Urinary tract infection, site not specified |

### Index:

| Escherichia (E.) coli, as cause of disease classified elsewhere B96.2 |
| Or |
| Infection, infected (opportunistic) B99 |
| - Escherichia (E.) coli NEC A49.8 |
| - - as cause of disease classified elsewhere B96.2 |

### Tabular:

| B96.2 Escherichia coli [E. coli] as the cause of diseases classified to other chapters |

### Index:

| Imbalance R26.8 |
| Or |
| Unsteadiness on feet R26.8 |
| Or |
Abnormal, abnormality, abnormalities – see also Anomaly
- gait (see also Gait) R26.8
Or
Gait
- abnormality R26.8

Tabular:
R26.8 Other and unspecified abnormalities of gait and mobility

Question 9
Stage 4 chronic kidney disease due to hypertension. [6 Marks]

CODES AND TITLES
N18.4 Chronic kidney disease, stage 4
I12.0 Hypertensive renal disease with renal failure

Index:
Disease, diseased – see also Syndrome
- kidney (functional) (pelvis) N28.9
  - chronic N18.9
  - - stage 4 N18.4

Tabular:
N18.4 Chronic kidney disease, stage 4

Index:
Hypertension, hypertensive (accelerated) (benign) (essential) (idiopathic) (malignant) (primary) (systemic) I10
- kidney I12.9
  - with
  - - renal failure I12.0
Or
Failure, failed
- kidney N19
  - chronic N18.9
  - - hypertensive (see also Hypertension, kidney) I12.0
Or
Failure, failed
- kidney N19
  - - hypertensive (see also Hypertension, kidney) I12.0
Or
### Question 10

Patient admitted with rhabdomyolysis affecting the left thigh. There was no sign of acute kidney injury or compartment syndrome, however, they were suffering with hyperkalaemia, which required treatment. [7 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>M62.85 Other specified disorders of muscle – Pelvic region and thigh</td>
</tr>
<tr>
<td>E87.5 Hyperkalaemia</td>
</tr>
</tbody>
</table>

**Index:**

Rhabdomyolysis (idiopathic) NEC M62.8

**Tabular:**

M62.8 Other specified disorders of muscle

5 Pelvic region and thigh

**Index:**

Hyperkalemia E87.5

**Tabular:**

E87.5 Hyperkalaemia

### Question 11

Admitted for cataract surgery – has nuclear sclerosis cataract. The patient has type 2 diabetes and is known to have diabetic retinopathy. [10 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
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</thead>
<tbody>
<tr>
<td>H25.1 Senile nuclear cataract</td>
</tr>
<tr>
<td>E11.3† Type 2 diabetes mellitus - with ophthalmic complications</td>
</tr>
<tr>
<td>H36.0* Diabetic retinopathy (E10-E14 with common fourth character .3†)</td>
</tr>
</tbody>
</table>

**Index:**

Diabetic retinopathy (E10-E14 with common fourth character .3†)

**Tabular:**

1. H25.1
2. E11.3D
3. H36.0A
4. 
5. 
6. 

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*National Clinical Coding Qualification (UK) March 2018*

*March 2018 Practical Paper Version 1.0*
Index:
Cataract (cortical) (immature) (incipient) (see also Cataracta) H26.9
- nuclear
- - sclerosis H25.1

Tabular:
H25.1 Senile nuclear cataract

Index:
Diabetes, diabetic (mellitus) (controlled) (familial) (severe) E14.-
- type 2 (nonobese) (obese) E11.-

Tabular:
E11 Type 2 diabetes mellitus .3†
With ophthalmic complications

Index:
Retinopathy (background) (Coats) (exudative) (hypertensive) H35.0
- diabetic (see also E10-E14 with fourth character .3) E14.3† H36.0*

Tabular:
H36.0* Diabetic retinopathy (E10-E14 with common fourth character .3†)

Question 12
15 year old admitted with rheumatoid vasculitis affecting the hands. [4 Marks]

CODES AND TITLES
M05.24 Rheumatoid vasculitis - Hands

Index:
Rheumatoid – see also condition
- vasculitis M05.2
Or
Vasculitis I77.6
- rheumatoid M05.2
Question 13

Miliary tuberculosis resulting from human immunodeficiency virus [HIV] disease. [6 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
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</thead>
<tbody>
<tr>
<td>B20.0 HIV disease resulting in mycobacterial infection</td>
<td>1</td>
</tr>
<tr>
<td>A19.9 Miliary tuberculosis, unspecified</td>
<td>2</td>
</tr>
</tbody>
</table>

**Index:**

**Human**
- immunodeficiency virus (HIV) disease (infection) B24
  - - resulting in
  - - - infection B20.9
  - - - - tuberculous B20.0

Or

**Human**
- immunodeficiency virus (HIV) disease (infection) B24
  - - resulting in
  - - - tuberculosis B20.0

Or

**Tuberculosis, tubercular, tuberculous (caseous)**
  (degeneration) (gangrene) (necrosis) A16.9
  - resulting from HIV disease B20.0

**Tabular:**

B20.0 HIV disease resulting in mycobacterial infection

**Index:**

**Tuberculosis, tubercular, tuberculous (caseous)**
  (degeneration) (gangrene) (necrosis) A16.9
  - miliary A19.9

**Tabular:**

A19.9 Miliary tuberculosis, unspecified

Question 14

Patient admitted for treatment of erythrocytosis secondary to sleep apnoea. [6 Marks]

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<table>
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<tbody>
<tr>
<td>1</td>
<td>D75.1</td>
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<tr>
<td>2</td>
<td>G47.3</td>
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<tr>
<td>3</td>
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<td>4</td>
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</tbody>
</table>
### CODES AND TITLES

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>D75.1 Secondary polycythaemia</td>
</tr>
<tr>
<td>G47.3 Sleep apnoea</td>
</tr>
</tbody>
</table>

**Index:**

Erythrocytosis (megalosplenic) (secondary) D75.1

**Tabular:**

D75.1 Secondary polycythaemia

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>G47.3 Sleep apnoea</td>
</tr>
</tbody>
</table>

**Index:**

Sleep
- apnea G47.3
Or
Apnea, apneic (spells) R06.8
- sleep (central) (obstructive) G47.3

**Tabular:**

G47.3 Sleep apnoea

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**Question 15**

Obstetric patient admitted at 36 weeks for induction of labour due to obstetric cholestasis. Delivered a liveborn baby boy. [9 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>O26.6 Liver disorders in pregnancy, childbirth and the puerperium</td>
</tr>
<tr>
<td>Z37.0 Single live birth</td>
</tr>
<tr>
<td>O60.3 Preterm delivery without spontaneous labour</td>
</tr>
</tbody>
</table>

**Index:**

Pregnancy (single) (uterine)
- complicated by (see also Pregnancy, management, affected by)
- cholestasis (intrahepatic) O26.6
Or
Cholestasis NEC K83.1
- complicating pregnancy, childbirth or the puerperium (intrahepatic) O26.6

**Tabular:**

O26.6 Liver disorders in pregnancy, childbirth and the puerperium
**Index:**

Outcome of delivery Z37.9  
- single Z37.9  
- - liveborn Z37.0

**Tabular:**

Z37.0 Single live birth

**Index:**

Labor (see also Delivery)  
- early onset (before 37 completed weeks of gestation)  
- - induced  
Or
Labor (see also Delivery)  
- premature or preterm  
- - induced  
Or
Delivery (single) O80.9  
- early onset NEC O60.1  
- - without spontaneous labor (cesarean section) (induction) O60.3  
Or
Delivery (single) O80.9  
- premature or preterm NEC O60.1  
- - without spontaneous labor (cesarean section) (induction) O60.3  
Or
Premature – see also condition  
- delivery (with spontaneous labor) O60.1  
- - without spontaneous labor (cesarean section) (induction) O60.3

**Tabular:**  
O60.3 Preterm delivery without spontaneous labour

[Total for Section A [1]: 110]
Section A [2] 15%
Write your candidate number on every page

OPCS-4.8 codes are required for the next 15 questions [16 – 30]
[ICD-10 codes are NOT required]

Provide appropriate code(s) for the following interventions/procedures in the boxes alongside each question. If more than one code is required, please use separate boxes for each code to make sequencing clear, for example, box 1 should contain the primary procedure/intervention code. [The number of boxes is not necessarily indicative of the codes required].

Question 16
Partial open horizontal laryngectomy and pharyngectomy. [6 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
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<tbody>
<tr>
<td>E19.2 Partial pharyngectomy</td>
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<tr>
<td>E29.2 Partial horizontal laryngectomy</td>
<td>2</td>
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</tbody>
</table>

Index:
E19.- Pharyngectomy
Or
E19.- Excision Pharynx

Tabular:
E19.2 Partial pharyngectomy

<table>
<thead>
<tr>
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<th>Index:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>E29.- Excision Larynx</td>
</tr>
<tr>
<td>4</td>
<td>Or</td>
</tr>
<tr>
<td>5</td>
<td>E29.- Laryngectomy Open</td>
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</table>

<table>
<thead>
<tr>
<th>Tabular:</th>
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</thead>
<tbody>
<tr>
<td>E29.2 Partial horizontal laryngectomy</td>
</tr>
</tbody>
</table>

Question 17
Posterior discectomy of L2/3 and L3/4 performed under radiological control in order to decompress the lumbar spine. [9 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>V25.5 Posterior discectomy</td>
<td>1</td>
</tr>
<tr>
<td>V55.2 Posterior discectomy</td>
<td>2</td>
</tr>
<tr>
<td>Y53.1 Posterior discectomy</td>
<td>3</td>
</tr>
</tbody>
</table>

Index:
V25.- Discectomy, posterior of spine
Or
V55.- Discectomy, posterior of spine
Or
Y53.- Discectomy, posterior of spine

Tabular:
V25.5 Posterior discectomy

<table>
<thead>
<tr>
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<tr>
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<td>Or</td>
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<td>6</td>
<td>Y53.- Posterior discectomy</td>
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### CODES AND TITLES

<table>
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<th>Tabular:</th>
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<tbody>
<tr>
<td>V25.5 Primary posterior decompression of lumbar spine NEC</td>
<td>V25.- Decompression Spine Lumbar NEC</td>
<td>V25.5 Primary posterior decompression of lumbar spine NEC</td>
</tr>
<tr>
<td>V55.2 Two levels of spine</td>
<td>V55.- Spine Levels</td>
<td>V55.2 Two levels of spine</td>
</tr>
<tr>
<td>Y53.1 Approach to organ under radiological control</td>
<td>Or</td>
<td>Or Y53.1 Approach Control Radiological</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td>Or Y53.1 Approach Radiological Control</td>
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<tr>
<td></td>
<td>Or</td>
<td>Or Y53.1 Radiological Control Approach</td>
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### Question 18

**Construction of an artificial bladder using ileum following cystourethrectomy during the same theatre visit. [6 Marks]**

<table>
<thead>
<tr>
<th>Codes and Titles</th>
<th>1. M34.2</th>
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<tbody>
<tr>
<td>M34.2 Cystourethrectomy</td>
<td>2. M19.1</td>
</tr>
<tr>
<td>M19.1 Construction of ileal conduit</td>
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### Index:

<table>
<thead>
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<tbody>
<tr>
<td>M34.2 Cystourethrectomy</td>
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</tbody>
</table>
### Question 19

**Implantation of a cardiac resynchronisation therapy (cardioverter) defibrillator (CRT-D) device using two leads under image control. [6 Marks]**

**CODES AND TITLES**

1. **K59.6** Implantation of cardioverter defibrillator using three electrode leads  
2. **Y53.9** Unspecified approach to organ under image control

**Index:**

- K59.6 Implantation Cardioverter Defibrillator Three Electrode Leads  
- Or  
- K59.- Implantation Cardioverter Defibrillator

**Tabular:**

- K59.6 Implantation of cardioverter defibrillator using three electrode leads

**Index:**

- Y53.- Approach Control Image  
- Or  
- Y53.- Approach Image Control  
- Or  
- Y53.- Image Control Approach

**Tabular:**

- Y53.9 Unspecified approach to organ under image control

### Question 20

**Reconstruction of left orbital cavity using dermal fat graft from the back. [12 Marks]**

1. **C05.1**  
2. **Z94.3**  
3. **Y67.2**  
4. **Z49.4**  
5.  
6.
### CODES AND TITLES
- **C05.1** Reconstruction of cavity of orbit
- **Z94.3** Left sided operation
- **Y67.2** Harvest of composite of skin and fat
- **Z49.4** Skin of back

### MARKING SCHEME

#### Index:
- C05.1 Reconstruction Orbit Cavity

#### Tabular:
- C05.1 Reconstruction of cavity of orbit

#### Index:
- Z94.3 Left Sided Operations
- Or
- Z94.3 Operations Left Sided

#### Tabular:
- Z94.3 Left sided operation

#### Index:
- Y67.2 Harvest Dermis Fat

#### Tabular:
- Y67.2 Harvest of composite of skin and fat
  - Includes: Harvest of dermis fat NEC

#### Index:
- Z49.- Subcutaneous Tissue Trunk site

#### Tabular:
- Z49.4 Skin of back

---

### Question 21

**Destructive dorsal root ganglion nerve block of the right thoracic spinal nerve roots. [9 Marks]**

#### CODES AND TITLES
- **A57.5** Destruction of spinal nerve root NEC
- **Z07.2** Spinal nerve root of thoracic spine
- **Z94.2** Right sided operation

#### Index:
- A57.5 Destruction Nerve Root Spinal NEC
Tabular:
A57.5 Destruction of spinal nerve root NEC

Index:
Z07.- Nerve Root Spinal site
Or
Z07.- Spinal Nerve Root site

Tabular:
Z07.2 Spinal nerve root of thoracic spine

Index:
Z94.2 Right Sided Operations
Or
Z94.2 Operations Right Sided

Tabular:
Z94.2 Right sided operation

Question 22

**Bilateral maxillary antrum washout. [6 Marks]**

**CODES AND TITLES**

1. E13.6
2. Z94.1

**Index:**
Washout - see also Irrigation
E13.6 Irrigation Maxillary Antrum NEC

**Tabular:**
E13.6 Puncture of maxillary antrum
Includes: Irrigation of maxillary antrum NEC

**Index:**
Z94.1 Bilateral Operations
Or
Z94.1 Operations Bilateral

**Tabular:**
Z94.1 Bilateral operation

Candidates were neither awarded nor penalised for assigning the code Y22.3 Irrigation of organ NOC.
Question 23

Freeing of limited jejunal adhesions and excision of endometriosis from the jejunum with insertion of adhesion barrier (a non-removable soluble material). [11 Marks]

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T41.3 Freeing of adhesions of peritoneum</td>
<td>1.</td>
</tr>
<tr>
<td>Z27.5 Jejunum</td>
<td>2.</td>
</tr>
<tr>
<td>G59.1 Excision of lesion of jejunum</td>
<td>3.</td>
</tr>
<tr>
<td>Y36.8 Other specified introduction of non-removable</td>
<td>4.</td>
</tr>
<tr>
<td>material into organ NOC</td>
<td>5.</td>
</tr>
</tbody>
</table>

Index:

T41.3 Freeing Bowel Adhesions Limited

Tabular:

T41.3 Freeing of adhesions of peritoneum

Includes: Freeing of adhesions of bowel

Index:

Z27.5 Jejunum site

Tabular:

Z27.5 Jejunum

Index:

G59.1 Excision Jejunum Lesion

Tabular:

G59.1 Excision of lesion of jejunum

Index:

Insertion – see also Introduction

Y36.8 - Introduction Material Non-removable NOC

Tabular:

Y36.8 Other specified introduction of non-removable material into organ NOC

Question 24

Endonasal endoscopic biopsy of a pituitary stalk tumour. [9 Marks]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>B04.5</td>
<td>1.</td>
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<tr>
<td>Y76.6</td>
<td>2.</td>
</tr>
<tr>
<td>Y20.3</td>
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</tr>
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<td>4.</td>
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<tr>
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<td>5.</td>
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</tbody>
</table>

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Version 1.0

Page 19
<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
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</tr>
</thead>
<tbody>
<tr>
<td>B04.5 Operations on pituitary stalk</td>
<td></td>
</tr>
<tr>
<td>Y76.6 Endonasal endoscopic approach to other body cavity</td>
<td></td>
</tr>
<tr>
<td>Y20.3 Biopsy of lesion of organ NOC</td>
<td></td>
</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
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<tr>
<td>B04.5 Pituitary Stalk Operations</td>
<td></td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
</tr>
<tr>
<td>B04.5 Operations on pituitary stalk</td>
<td></td>
</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
</tr>
<tr>
<td>Y20.- Biopsy Lesion NOC</td>
<td></td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
</tr>
<tr>
<td>Y20.3 Biopsy of lesion of organ NOC</td>
<td></td>
</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
</tr>
<tr>
<td>Y76.6 Approach Body Cavity Endoscopic Endonal</td>
<td></td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
</tr>
<tr>
<td>Y76.6 Endonal endoscopic approach to other body cavity</td>
<td></td>
</tr>
</tbody>
</table>

### Question 25

**Resection of a portion of the bile duct using robotic minimal access approach. Reconstruction by connecting the bile duct to the duodenum. [6 Marks]**

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>J27.2 Partial excision of bile duct and anastomosis of bile duct to duodenum</td>
<td></td>
</tr>
<tr>
<td>Y75.3 Robotic minimal access approach to abdominal cavity</td>
<td></td>
</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
</tr>
<tr>
<td>Resection - see also Excision</td>
<td></td>
</tr>
<tr>
<td>J27.- Excision Bile Duct</td>
<td></td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
</tr>
<tr>
<td>J27.2 Partial excision of bile duct and anastomosis of bile duct to duodenum</td>
<td></td>
</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
</tr>
<tr>
<td>Y75.3 Approach Abdominal Cavity Robotic Minimal Access</td>
<td></td>
</tr>
</tbody>
</table>
### Question 26

**Anastomotic closure of Hartmann’s colostomy. [9 Marks]**

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>H15.4 Closure of colostomy</td>
<td>1.</td>
</tr>
<tr>
<td>Y16.2 Anastomosis of organ NOC</td>
<td>2.</td>
</tr>
<tr>
<td>Z29.1 Rectum</td>
<td>3.</td>
</tr>
</tbody>
</table>

**Index:**
- Closure - see also Operation site
- H15.- Colostomy NEC

**Tabular:**
- H15.4 Closure of colostomy

**Index:**
- Y16.2 Anastomosis NOC

**Tabular:**
- Y16.2 Anastomosis of organ NOC

**Index:**
- Z29.1 Rectum site

**Tabular:**
- Z29.1 Rectum

### Question 27

**Stapedectomy and titanium prosthetic replacement of ossicular chain of the left ear. [9 Marks]**

<table>
<thead>
<tr>
<th>CODES AND TITLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D16.1 Prosthetic replacement of ossicular chain</td>
<td>1.</td>
</tr>
<tr>
<td>D17.1 Stapedectomy</td>
<td>2.</td>
</tr>
<tr>
<td>Z94.3 Left sided operation</td>
<td>3.</td>
</tr>
</tbody>
</table>

**Index:**
- D16.- Replacement Ossicular Chain
- Or
- D16.- Prosthesis Ossicular Chain
**Tabular:**
D16.1 Prosthetic replacement of ossicular chain

**Index:**
D17.- Stapedectomy
Or
D17.- Ear Ossicle Operations NEC

**Tabular:**
D17.1 Stapedectomy

**Index:**
Z94.3 Left Sided Operations
Or
Z94.3 Operations Left Sided

**Tabular:**
Z94.3 Left sided operation

---

**Question 28**

Six year old patient admitted to the paediatric ward for glue closure of chin laceration. [6 Marks]

**CODES AND TITLES**
S40.4 Tissue adhesive closure of skin of head or neck
Z47.5 Skin of chin

**Index:**
S40.- Closure Skin NEC

**Tabular:**
S40.4 Tissue adhesive closure of skin of head or neck
Includes: Glue closure of skin of head or neck

**Index:**
Z47.- Skin Face site

**Tabular:**
Z47.5 Skin of chin
Transluminal percutaneous angioplasty and insertion of one drug-eluting stent into left femoral artery under fluoroscopic control. [12 Marks]

CODES AND TITLES
L63.5 Percutaneous transluminal insertion of stent into femoral artery
L89.5 Endovascular placement of one drug-eluting stent
Y53.4 Approach to organ under fluoroscopic control
Z94.3 Left sided operation

Index:
L63.5 Insertion Artery Femoral Stent Transluminal Percutaneous

Tabular:
L63.5 Percutaneous transluminal insertion of stent into femoral artery

Index:
L89.- Placement Stent Drug-eluting Endovascular

Tabular:
L89.5 Endovascular placement of one drug-eluting stent

Index:
Y53.4 Approach Control Fluoroscopic
Or
Y53.4 Approach Fluoroscopic Control
Or
Y53.4 Fluoroscopic Control Approach

Tabular:
Y53.4 Approach to organ under fluoroscopic control

Index:
Z94.3 Left Sided Operations
Or
Z94.3 Operations Left Sided

Tabular:
Z94.3 Left sided operation
Question 30

Patient with multiple co-morbidities admitted as an inpatient for an intrathecal injection of Trastuzumab intrathecal chemotherapy regimen (day one, cycle one) to treat leptomeningeal carcinomatosis. [6 Marks]

CODES AND TITLES
A54.2 Injection of therapeutic substance into cerebrospinal fluid
X70.3 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 3

Index:
A54.- Injection Intrathecal

Tabular:
A54.2 Injection of therapeutic substance into cerebrospinal fluid

Index:
X70.- Chemotherapy Drugs Neoplasm Procurement Bands 1-5
Or
X70.- Procurement Chemotherapy Neoplasm Drugs Bands 1-5

<table>
<thead>
<tr>
<th>Regimen Name (Short version)</th>
<th>Regimen name (Long version)</th>
<th>Component Drug name</th>
<th>Proc. OPCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trastuzumab Intrathecal</td>
<td>Trastuzumab Intrathecal</td>
<td>Trastuzumab</td>
<td>X70.3</td>
</tr>
</tbody>
</table>

Tabular:
X70.3 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 3

[Total for Section A [2]: 122]
Section B [70%]
Write your candidate number on EVERY page

Answer all 7 questions in this Section using the Case Study Answer Sheets provided

Case Study Number 1 [22 Marks]

Appropriate index trails are required for this Case Study only. To obtain full marks they must exactly replicate the full content of the ICD-10 and OPCS-4.8 Alphabetical Indexes for each code assigned.

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Respiratory Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Dr Elverum</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>18th August 2017</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>22nd August 2017</td>
</tr>
<tr>
<td>History</td>
<td>Patient with known motor neuron disease admitted with dyspnoea and orthopnoea. Respiratory support used at home is now proving to be less effective. The patient was found to be in Type II respiratory failure and a decision was made to place a tracheostomy for invasive ventilation.</td>
</tr>
<tr>
<td>Co-morbidities</td>
<td>Depression.</td>
</tr>
<tr>
<td>Procedure</td>
<td>Invasive ventilation.</td>
</tr>
<tr>
<td></td>
<td>A guide wire was placed between two tracheal rings entering the anterior tracheal wall in the midline. Following this, the wire was used to direct the passage of one dilator over the wire to mechanically separate the rings and create the stoma for the tracheostomy tube. The position of the head was assessed, a single dilator of appropriate size was placed with a long taper to create the stoma with a single pass, and tubes with tapered tips, allowing them to more smoothly pass through the neck tissues over the insertion dilator. All components checked, and the procedure completed.</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Respiratory failure.</td>
</tr>
<tr>
<td>Management</td>
<td>Two days after the procedure the patient developed cellulitis of the leg. She was given a one week course of oral antibiotics and discharged.</td>
</tr>
</tbody>
</table>
Case Study Number 1

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. J96.91</td>
<td>1. E85.1</td>
</tr>
<tr>
<td>2. G12.2</td>
<td>2. E42.3</td>
</tr>
<tr>
<td>3. L03.1</td>
<td>3.</td>
</tr>
<tr>
<td>4. F32.9</td>
<td>4.</td>
</tr>
</tbody>
</table>

INDEX TRAILS AND TABULAR ENTRIES

**ICD-10**

**Index:**
Failure, failed
- respiration, respiratory J96.9

**Tabular:**
J96.9 Respiratory failure, unspecified
1 Type II [hypercapnic]

**Index:**
Disease, diseased – see also
Syndrome
- motor neuron (bulbar) (familial)
 (mixed type) (spinal) G12.2

**Tabular:**
G12.2 Motor neuron disease

**OPCS-4.8**

**Index:**
E85.1 Ventilation Invasive

**Tabular:**
E85.1 Invasive ventilation

**Index:**
E42.- Tracheostomy

**Tabular:**
E42.3 Temporary tracheostomy

**Index:**
Cellulitis (diffuse) (with lymphangitis) L03.9
- leg, except toe(s) L03.1

**Tabular:**
L03.1 Cellulitis of other parts of limb

**Index:**
Depression F32.9

**Tabular:**
F32.9 Depressive episode, unspecified
Case Study Number 2 [22 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Neonatal</th>
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</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Dr Baker</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>20th January 2018</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>13th February 2018</td>
</tr>
</tbody>
</table>

**History**

Male infant born at 37+4 weeks in hospital. Initially well but began to vomit after feeds. Nurse and paediatrician witnessed vomiting with the infant in obvious distress and discomfort. The smell was noted to be acidic.

This did not subside as expected over the following five days so the patient underwent a gastroscopy. This demonstrated significant reflux oesophagitis given the age of the patient. The stomach was structurally normal. The duodenum was not entered.

The child was started on alginates but two weeks later there was still significant vomiting and the baby had not gained weight as expected. It was decided to perform a Nissen fundoplication.

**Diagnosis**

Gastro-oesophageal reflux disease.

**Procedure**

**Nissen fundoplication.**

Laparoscopy ports made and carbon dioxide gas used to inflate the abdomen. Laparoscopy instruments inserted into the abdomen.

The surgeon examined the diaphragm to check the size of the opening around the oesophagus. Satisfied, the fundus was wrapped around the base of the oesophagus and loosely stitched in place.

The procedure was completed and the laparoscope was removed.

**Discharge**

It was noted that the baby had a sticky eye, and was treated for conjunctivitis. Patient made good progress post-operatively and was discharged.

**ICD-10 Codes**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>P78.8</td>
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<tr>
<td>2.</td>
<td>Z38.0</td>
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</table>

**OPCS-4.8 Codes**

<p>| | |</p>
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<tbody>
<tr>
<td>1.</td>
<td>G24.3</td>
</tr>
<tr>
<td>2.</td>
<td>Y75.2</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>K21.0</td>
</tr>
<tr>
<td>3.</td>
<td>G45.9</td>
</tr>
<tr>
<td>4.</td>
<td>P39.1</td>
</tr>
<tr>
<td>4.</td>
<td>Z27.2</td>
</tr>
</tbody>
</table>

### ICD-10 Index:

**Conditions arising in the perinatal period**
- disorder (of) – *see also* Conditions arising in the perinatal period, disease
- - digestive (system), fetus or newborn P78.9
- - - specified NEC P78.8
Or

**Conditions arising in the perinatal period**
- neonatal esophageal reflux P78.8
Or

**Conditions arising in the perinatal period**
- gastro-esophageal reflux in newborn P78.8
Or

**Disorder (of) – *see also* Disease**
- digestive (system) K92.9
- - fetus or newborn P78.9
- - - specified NEC P78.8
Or

**Reflux**
- esophageal K21.9
- - neonatal P78.8
Or

**Reflux**
- gastroesophageal K21.9
- - in newborn P78.8

**Tabular:**
- P78.8 Other specified perinatal digestive system disorders

### OPCS-4.8 Index:

**Antireflux Operations**
- G24.- Antireflux Operations
Or
- G24.- Fundoplication Antireflux NEC
Or
- G24.3 Nissen Abdominal Antireflux Operation

**Tabular:**
- G24.3 Antireflux fundoplication using abdominal approach

### Index:

**Approach Abdominal Cavity Laparoscopic NEC**

**Tabular:**
- Y75.2 Laparoscopic approach to abdominal cavity NEC

**Index:**
- G45.- Gastroscopy NEC

**Tabular:**
- G45.9 Unspecified diagnostic fibreoptic endoscopic examination of upper gastrointestinal tract

**Index:**
- Z27.2 Stomach site

**Tabular:**
- Z27.2 Stomach
Or
Newborn (infant) (liveborn) (singleton) Z38.2
- born in hospital Z38.0

**Tabular:**
Z38.0 Singleton, born in hospital

**Index:**
Reflux
- esophageal K21.9
- - with esophagitis K21.0
Or
Reflux
- gastroesophageal K21.9
- - with esophagitis K21.0
Or
Esophagitis (acute) (alkaline) (chemical) (chronic) (infectional) (necrotic) (peptic) (postoperative) K20
- due to gastrointestinal reflux disease K21.0
Or
Esophagitis (acute) (alkaline) (chemical) (chronic) (infectional) (necrotic) (peptic) (postoperative) K20
- reflux K21.0

**Tabular:**
K21.0 Gastro-oesophageal reflux disease with oesophagitis

**Index:**
Conditions arising in the perinatal period
- conjunctivitis (in) (due to)
- - neonatal P39.1
Or
Conjunctivitis (in) (due to) H10.9
- neonatal P39.1

**Tabular:**
P39.1 Neonatal conjunctivitis and dacryocystitis
Candidates were neither awarded nor penalised for assigning the code P92.0 Vomiting in newborn.
Case Study Number 3 [26 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Cardiac Surgery</th>
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</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Miss O’Neil</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>26th July 2017</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>28th July 2017</td>
</tr>
<tr>
<td>History</td>
<td>67 year old patient admitted electively for a triple coronary artery bypass. He was admitted for an angiocardiography in May 2017 due to chest pains. This showed extensive coronary artery disease in the left anterior descending artery, left circumflex artery and right coronary artery.</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Coronary artery disease.</td>
</tr>
</tbody>
</table>
| Procedure       | **Coronary artery bypass graft.**  
Patient anaesthetised and placed on cardiopulmonary bypass. Saphenous vein taken from leg for graft material.  
Two saphenous vein grafts used on the right coronary artery and left circumflex artery.  
Anastomosis of left anterior descending to left internal mammary artery.  
Patency ensured in graft materials.  
Haemostasis achieved, and the patient was weaned off cardiopulmonary bypass. |
| Discharge       | The procedure was successful, however, two days afterwards the patient developed postoperative fast atrial fibrillation. He was taken back to theatre where temporary pacing wires were placed via the subclavian vein under fluoroscopic control. He was discharged with the pacing wires in situ with a review date in one week. |
Case Study Number 3

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
</tr>
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<tbody>
<tr>
<td>1. I25.1</td>
<td>1. K45.3</td>
</tr>
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<td>2. I25.2</td>
<td>2. K40.2</td>
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<tr>
<td>3. I48.9</td>
<td>3. Y73.1</td>
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<td>4. Y83.2</td>
<td>4. K60.1</td>
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<tr>
<td>6.</td>
<td>6. Y53.4</td>
</tr>
</tbody>
</table>

INDEX TRAILS AND TABULAR ENTRIES

**ICD-10**

**Index:**

*Disease, diseased* – *see also*

Syndrome
- artery I77.9
- coronary I25.1

Or

*Disease, diseased* – *see also*

Syndrome
- coronary (artery) I25.1

Or

*Disease, diseased* – *see also*

Syndrome
- heart (organic) I51.9
- artery, arterial I25.1

**Tabular:**

I25.1 Atherosclerotic heart disease

**OPCS-4.8**

**Index:**

K45.- Anastomosis Artery Mammary Coronary

**Tabular:**

K45.3 Anastomosis of mammary artery to left anterior descending coronary artery

**Index:**

K40.- Replacement Artery Coronary Graft Vein Saphenous

**Tabular:**

K40.2 Saphenous vein graft replacement of two coronary arteries

**Index:**

Y73.1 Bypass Cardiopulmonary

**Tabular:**

Y73.1 Cardiopulmonary bypass

**Index:**

K60.1 Implantation Pacemaker Cardiac Intravenous NEC

Or

K60.- System Cardiac Pacemaker Intravenous
**Infarct, infarction (of)**
- myocardium, myocardial (acute or with a stated duration of 4 weeks or less) I21.9
- - past (diagnosed on ECG or other special investigation, but currently presenting no symptoms) I25.2

**Tabular:**
I25.2 Old myocardial infarction

**Index:**
Fibrillation
- atrial or auricular (established) I48.9

**Tabular:**
I48.9 Atrial fibrillation and atrial flutter, unspecified

**Index:**
Complication (delayed) (of or following) (medical or surgical procedure) Y84.9
- anastomosis (arteriovenous) (blood vessel) (gastrojejunal) (skin) (tendon) (natural, artificial material, tissue) Y83.2
- bypass Y83.2
- graft Y83.2
- bypass Y83.2
- graft Y83.2

**Tabular:**
K60.1 Implantation of intravenous cardiac pacemaker system NEC

**Index:**
Y70.5 Operations Temporary
- Y70.5 Operations Temporary

**Tabular:**
Y70.5 Temporary operations

**Index:**
Y53.4 Approach Control Fluoroscopic
- Y53.4 Approach Fluoroscopic Control
- Y53.4 Fluoroscopic Control Approach

**Tabular:**
Y53.4 Approach to organ under fluoroscopic control

---

**Tabular:**
K60.1 Implantation of intravenous cardiac pacemaker system NEC

**Index:**
Y70.5 Operations Temporary
- Y70.5 Operations Temporary

**Tabular:**
Y70.5 Temporary operations

**Index:**
Y53.4 Approach Control Fluoroscopic
- Y53.4 Approach Fluoroscopic Control
- Y53.4 Fluoroscopic Control Approach

**Tabular:**
Y53.4 Approach to organ under fluoroscopic control

---

**Tabular:**
K60.1 Implantation of intravenous cardiac pacemaker system NEC

**Index:**
Y70.5 Operations Temporary
- Y70.5 Operations Temporary

**Tabular:**
Y70.5 Temporary operations

**Index:**
Y53.4 Approach Control Fluoroscopic
- Y53.4 Approach Fluoroscopic Control
- Y53.4 Fluoroscopic Control Approach

**Tabular:**
Y53.4 Approach to organ under fluoroscopic control
<table>
<thead>
<tr>
<th>Complication (delayed) (of or following) (medical or surgical procedure)</th>
<th>Y84.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>- surgical operation NEC <em>(see also)</em></td>
<td></td>
</tr>
<tr>
<td>Complication, by type of operation)</td>
<td></td>
</tr>
<tr>
<td>Y83.9</td>
<td></td>
</tr>
<tr>
<td>- - reconstructive NEC Y83.4</td>
<td></td>
</tr>
<tr>
<td>- - - with</td>
<td></td>
</tr>
<tr>
<td>- - - - anastomosis, bypass or graft Y83.2</td>
<td></td>
</tr>
</tbody>
</table>

**Tabular:**

| Y83.2 Surgical operation with anastomosis, bypass or graft   |      |
Case Study Number 4 [24 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Orthopaedics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Mr Hannah</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>18th December 2017</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>23rd December 2017</td>
</tr>
</tbody>
</table>

**Episode Summary**

This 42 year old man was brought in by ambulance acutely intoxicated having been out on a Christmas night out. He had been walking on the street when he slipped on the pavement. His right ankle was grossly swollen. The X-rays showed a bi-malleolar fracture of the right ankle. The fracture was reduced in A&E while they waited for an orthopaedic opinion and taken for a further series of X-rays. The orthopaedic surgeon attended and having reviewed the X-rays decided to admit the patient for a fixation. The operation was delayed until the following day due to the acute alcohol intoxication.

**Diagnosis**

Bi-malleolar fracture of right ankle.

**Procedure**

Open reduction and internal fixation.

General anaesthetic given, and patient positioned for the lateral malleolus, which was considered the more complex of the fractures. Incision made, and the fracture reduced under direct vision with good alignment. The lateral malleolus was fixed with a four-hole plate, placed with screws. Satisfied with the outcome the patient was repositioned and attention was then turned to the medial malleolus. A medial incision was then made. The fracture was more linear and only required an intramedullary screw fixation following reduction. Both fractures were in good position and the wound was closed in layers.

**Discharge**

Good post-operative recovery. Pain managed well with analgesics. To be seen in Orthopaedic Outpatient Clinic in two weeks.

### Case Study Number 4

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. S82.80</td>
<td>1. W23.2</td>
</tr>
<tr>
<td>2. W01.4</td>
<td>2. Z78.4</td>
</tr>
<tr>
<td></td>
<td>F10.0</td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**INDEX TRAILS AND TABULAR ENTRIES**

### ICD-10

**Index:**
- Fracture (abduction) (adduction) (avulsion) (comminuted) (compression) (dislocation) (oblique) (separation) T14.2
- bimalleolar S82.8

**Tabular:**
S82.8 Fractures of other parts of lower leg 0 closed

**Index:**
- Slipping (accidental) (on same level) (with fall) W01
  - Or
  - Fall, falling (accidental) W19
    - same level NEC W18
    - - from
    - - - slipping, stumbling, tripping W01

**Tabular:**
W01 Fall on same level from slipping, tripping and stumbling 4 Street and highway

**Index:**
- Intoxicated NEC F10.0
  - Or
  - Intoxication
    - alcoholic (acute) (with) F10.0
    - Or
  - Alcohol, alcoholic, alcohol-induced
    - intoxication (acute) F10.0
    - Or
  - Drinking (alcohol)
    - excessive, to excess NEC F10.0
    - Or

### OPCS-4.8

**Index:**
- W23.- Reduction Bone Fracture Open Secondary

**Tabular:**
W23.2 Secondary open reduction of fracture of bone and extramedullary fixation HFQ

**Index:**
- Z78.4 Malleolus Lateral site

**Tabular:**
Z78.4 Lateral malleolus

**Index:**
- W23.- Reduction Bone Fracture Open Secondary

**Tabular:**
W23.1 Secondary open reduction of fracture of bone and intramedullary fixation HFQ

**Index:**
- Z77.3 Malleolus Medial site

**Tabular:**
Z77.3 Medial malleolus

**Index:**
- Z94.2 Right Sided Operations
  - Or
  - Z94.2 Operations Right Sided

**Tabular:**
Z94.2 Right sided operation
<table>
<thead>
<tr>
<th>Excess, excessive, excessively drinking (alcohol) NEC F10.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tabular:</strong></td>
</tr>
<tr>
<td>F10 Mental and behavioural disorders due to use of alcohol</td>
</tr>
<tr>
<td>.0 Acute intoxication</td>
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</table>
## Case Study Number 5 [23 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Gynaecology</th>
</tr>
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<tbody>
<tr>
<td>Consultant</td>
<td>Miss Grimes</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>20th September 2017</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>20th September 2017</td>
</tr>
</tbody>
</table>

### Episode Summary

Mrs Green presented to her General Practitioner with persistent irritation and offensive blood stained discharge from the vulva. Examination revealed a mass on the inner surface. An enlarged right inguinal lymph node was also noted. She was admitted as a day case for a biopsy of the lesion.

### Co-morbidities

Hypertension.

### Management / Treatment

- **Biopsy of lesion of vulva.**
  
  5% topical anaesthetic applied to the sites, followed by antiseptic solution.
  
  Tissue injected with 1% lidocaine.
  
  Biopsy forceps used to obtain a small segment of tissue.
  
  Using the biopsy punch the skin was fixed using the non-dominant hand and the dermatologic punch directed through the skin into the subcutaneous tissue. The tissue was lifted with the pick-up forceps and scissors used to clip the circular piece of tissue from the subcutaneous area.
  
  Specimen placed in labelled formalin container.
  
  Forceps then used to fix inguinal area and a plugged biopsy of the right inguinal lymph node was also taken.

### Diagnosis

Histology confirmed metastatic epithelial carcinoma to the labia majora, with an unknown primary site, although could possibly be the breast. The lymph node was negative.

### Discharge

She was discharged later the same day. An appointment for CT scan has been made for next week and she will be seen in outpatient clinic after CT scan to discuss treatment options.
## Case Study Number 5

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
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<tbody>
<tr>
<td>1. C79.8</td>
<td>1. P09.1 or P09.4 (Either P09.1 or P09.4 were accepted due to information extracted from the histology report)</td>
</tr>
<tr>
<td>2. C80.0</td>
<td>2. S13.2</td>
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<tr>
<td>3. R59.0</td>
<td>3. T87.7</td>
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<td>5. Z94.2</td>
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</table>

### INDEX TRAILS AND TABULAR ENTRIES

#### ICD-10 Index:

<table>
<thead>
<tr>
<th>Malignant Neoplasm, Neoplastic</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoplasm, labium (skin)</td>
<td>C51.9</td>
<td>C79.8</td>
</tr>
<tr>
<td>Neoplasm, majus</td>
<td>C51.0</td>
<td>C79.8</td>
</tr>
<tr>
<td>Neoplasm, vulva</td>
<td>C51.9</td>
<td>C79.8</td>
</tr>
</tbody>
</table>

#### Tabular:

**C79.8 Secondary malignant neoplasm of other specified sites**

#### OPCS-4.8 Index:

<table>
<thead>
<tr>
<th>Malignant Neoplasm, Neoplastic</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoplasm, labium (skin)</td>
<td>C51.9</td>
<td>C79.8</td>
</tr>
<tr>
<td>Neoplasm, majus</td>
<td>C51.0</td>
<td>C79.8</td>
</tr>
<tr>
<td>Neoplasm, vulva</td>
<td>C51.9</td>
<td>C79.8</td>
</tr>
</tbody>
</table>

#### Tabular:

**P09.1 Biopsy Vulva**

**P09.1 Biopsy Vulva Skin**

**P09.4 Biopsy Labia**

**P09.4 Biopsy Labia Lesion**

**P09.4 Biopsy Labia Skin Lesion**

**S13.2 Punch biopsy of lesion of skin NEC**

**T87.7 Excision or biopsy of inguinal lymph node**

**P09.1 Biopsy of lesion of vulva**

**P09.4 Biopsy of lesion of labia**

**S13.- Biopsy Skin Punch**

**T87.- Biopsy Lymph Node NEC**

**T87.7 Excision or biopsy of inguinal lymph node**
<table>
<thead>
<tr>
<th>Index:</th>
<th>Index:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enlargement, enlarged – see also</td>
<td>Y20.6 Biopsy Plugged NOC</td>
</tr>
<tr>
<td>Hypertrophy</td>
<td>Or</td>
</tr>
<tr>
<td>- lymph gland or node R59.9</td>
<td>Y20.- Biopsy NOC</td>
</tr>
<tr>
<td>- - localized R59.0</td>
<td>Tabular:</td>
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<tr>
<td></td>
<td>Y20.6 Plugged biopsy NOC</td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
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<tr>
<td>R59.0 Localized enlarged lymph nodes</td>
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</tr>
<tr>
<td><strong>Index:</strong></td>
<td></td>
</tr>
<tr>
<td>Hypertension, hypertensive</td>
<td>Z94.2 Right Sided Operations</td>
</tr>
<tr>
<td>(accelerated) (benign) (essential) (idiopathic) (malignant) (primary) (systemic)</td>
<td>Or</td>
</tr>
<tr>
<td>I10</td>
<td>Z94.2 Operations Right Sided</td>
</tr>
<tr>
<td><strong>Tabular:</strong></td>
<td></td>
</tr>
<tr>
<td>I10 Essential (primary) hypertension</td>
<td>Z94.2 Right sided operation</td>
</tr>
</tbody>
</table>
Case Study Number 6 [19 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Urology</th>
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</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Dr Freas</td>
</tr>
<tr>
<td>Date of Admission</td>
<td>22nd October 2017</td>
</tr>
<tr>
<td>Date of Discharge</td>
<td>23rd October 2017</td>
</tr>
</tbody>
</table>

**History**
The patient was admitted as an emergency with severe, colicky pain in the left flank and lower abdomen, which radiates to the testicular area. The patient confirmed that urine output has also reduced. The symptoms are in keeping with a lodged urinary calculus. The patient was admitted for further investigation and treatment.

During admission a pelvic ultrasound was performed, which showed a large stone in the left ureter and anechoic fluid-filled interconnected space with enhancement within the renal sinus. This was a classic demonstration that provided the diagnosis of hydrenephrosis.

From the above, as well as blood and urine tests, there is an element of acute kidney failure present.

A decision was made to take the patient to theatre for an emergency extracorporeal shock wave lithotripsy.

**Diagnosis**
- 8mm stone within the left ureter.
- Acute kidney injury.

**Co-morbidities**
- Type 1 diabetes mellitus.

**Procedure**
- **Extracorporeal shock wave lithotripsy.**
  The patient received a dextropropoxyphene suppository and paracetamol 20 minutes before the session. The endoscope was inserted and plastic stents placed in the left ureter. The stones were fragmented with an EDAP LT-02 piezo-electric lithotripter with ultrasound guidance. Lumbar ureteral stones were fragmented with the patient in the prone position. The stent was left in situ to ensure that any remaining fragments did not cause further obstruction.

**Discharge**
The patient was discharged with a urology clinic appointment in two weeks to assess whether the stent can be removed.
## Case Study Number 6

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. N13.2</td>
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</tr>
<tr>
<td>2. N17.9</td>
<td></td>
</tr>
<tr>
<td>3. E10.9</td>
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</tr>
<tr>
<td>4. Z94.3</td>
<td></td>
</tr>
</tbody>
</table>

### INDEX TRAILS AND TABULAR ENTRIES

**ICD-10 Index:**
- **Stone(s)** – *see also* Calculus
  - Calculus, calculi, calculous
    - ureter (impacted) (recurrent) N20.1
      - with
      - - - hydronephrosis N13.2

**Tabular:**
- **N13.2 Hydronephrosis with renal and ureteral calculous obstruction**

**ICD-10 Index:**
- **Failure, failed**
  - kidney N19
  - - acute N17.9

**Tabular:**
- **N17.9 Acute renal failure, unspecified**

**ICD-10 Index:**
- **Diabetes, diabetic (mellitus) (controlled) (familial) (severe)** E14.9
  - type 1 E10.

**Tabular:**
- **E10 Type 1 diabetes mellitus .9 Without complications**

**OPCS-4.8 Index:**
- **M31.- Fragmentation Ureter Calculus Extracorporeal**

**Tabular:**
- **M31.1 Extracorporeal shockwave lithotripsy of calculus of ureter**

**ICD-10 Index:**
- **Y14.4 Insertion Stent Plastic NOC**
  - or
  - **Y14.4 Insertion Stent NOC**

**Tabular:**
- **Y14.4 Insertion of plastic stent into organ NOC**

**ICD-10 Index:**
- **Y53.2 Approach Control Ultrasonic**
  - or
  - **Y53.2 Approach Ultrasonic Control**
  - or
  - **Y53.2 Ultrasonic Control Approach**

**Tabular:**
- **Y53.2 Approach to organ under ultrasonic control**

**ICD-10 Index:**
- **Z94.3 Left Sided Operations**
  - or
  - **Z94.3 Operations Left Sided**
<table>
<thead>
<tr>
<th><strong>Tabular:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Z94.3 Left sided operation</td>
</tr>
</tbody>
</table>

Candidates were neither awarded nor penalised for assigning the code Y70.1 Emergency operations NOC.
Case Study Number 7 [17 Marks]

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Elderly Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant</td>
<td>Dr Schwarzenbach</td>
</tr>
<tr>
<td>Admission Date</td>
<td>18th January 2018</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>25th January 2018</td>
</tr>
</tbody>
</table>

**Episode Summary**

This 84 year old with known mixed vascular and Alzheimer dementia was admitted to A&E with pyrexia and difficulty in breathing. A computed tomography of the chest was performed and a diagnosis of bronchopneumonia was made. He was commenced on 500mg erythromycin four times a day for seven days.

During the admission he was noted to be anaemic; his blood work up showed low HB and B12 deficiency. He was transfused with two units of blood, which raised his HB above 10.

His chest improved significantly over the next few days and he began to mobilise, he was still confused and aggressive at times.

A social assessment was made and as his wife was finding it increasingly difficult to cope with him at home the decision to admit him to a nursing home was made.

**Diagnoses**

- Bronchopneumonia.
- Vitamin B12 deficiency anaemia.
- Mixed vascular and Alzheimer dementia.

**Discharge**

He will be followed up by the community respiratory nurse and bloods will be taken at his GP to check haemoglobin levels.

**ICD-10 Codes**

<table>
<thead>
<tr>
<th>ICD-10 Codes</th>
<th>OPCS-4.8 Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. J18.0</td>
<td>1. U07.1</td>
</tr>
<tr>
<td>2. D51.9</td>
<td>2. Y98.1</td>
</tr>
<tr>
<td>4. F00.2A</td>
<td>4.</td>
</tr>
</tbody>
</table>
## INDEX TRAILS AND TABULAR ENTRIES

### ICD-10

**Index:**

- Pneumonia (acute) (double) (migratory) (purulent) (septic) (unresolved) J18.9
  - broncho, bronchial (confluent) (croupous) (diffuse) (disseminated) (involving lobes) (lobar) J18.0

Or

**Bronchopneumonia (see also Pneumonia, broncho)** J18.0

**Tabular:**

- J18.0 Bronchopneumonia, unspecified

**Index:**

- Anemia D64.9
  - deficiency D53.9
  - vitamin B 12 D51.9

**Tabular:**

- D51.9 Vitamin B12 deficiency anaemia, unspecified

### OPCS-4.8

**Index:**

- U07.1 Tomography Chest Computed

**Tabular:**

- U07.1 Computed tomography of chest

**Index:**

- Y98.- Radiology Procedures

**Tabular:**

- Y98.1 Radiology of one body area (or < 20 minutes)

### Index:

**Alzheimer's disease or sclerosis** G30.9

- dementia in G30.9† F00.9*
  - atypical or mixed G30.8† F00.2*

Or

**Dementia (persisting)** F03

- in (due to)
  - Alzheimer's disease G30.9† F00.9*
  - mixed type G30.8† F00.2*

**Tabular:**

- G30.8 Other Alzheimer disease F00.2* Dementia in Alzheimer disease, atypical or mixed type (G30.8†)
Candidates were neither awarded nor penalised for assigning the code Z51.3 Blood transfusion (without reported diagnosis).

[Total for Section B: 153]