cleaned and sterilised each morning. Handkerchiefs when soiled should be placed in a pail containing disinfectant, to avoid the danger attached to dried sputum.

The patient should be given frequent clean handkerchiefs and always hold one in front of his mouth when coughing or sneezing. Some disinfectant solution should be placed in the sputum cup before use to prevent the sputum adhering to it.

Hæmorrhage is one of the most alarming complications, coming from a blood vessel in the wall of a cavity. It may prove fatal at once, either from the severity of the hæmorrhage or from suffocation, the bronchial tubes of both lungs becoming filled with blood. Pleurisy often accompanies tuberculosis and may be dry or with effusion, requiring aspiration.

Pneumothorax may arise owing to a communication forming between that cavity and a tuberculous one. It occurs when the disease has extended so rapidly that there has been no time for the pleural thickening and adhesions, which usually occur, to take place. The symptoms are sudden severe pains, difficulty in breathing, and shock. Sometimes the patient dies in a very short time, sometimes he recovers. Tuberculous laryngitis, enteritis and meningitis are not uncommon complications, while anal fistula is a troublesome one, requiring surgical treatment.

Mental derangement leading to suicide may occur and also secondary infection of other organs, such as the larynx by the sputum, and additional respiratory infection such as pneumonia.

An advanced case of pulmonary tuberculosis is one in which the disease has made such progress that there is little or no chance of ultimate recovery. Thus the aim in treatment is absolute rest, and general nursing care, combined with treatment of the symptoms as they arise, and adequate observance of the rules of disinfection.

### HONOURABLE MENTION.

Miss E. K. Bush, who receives honourable mention, writes :—The patient may be nursed in the open air in a specially constructed revolving shelter, the open side of which is away from the wind and rain, on a verandah or in a large sunny room with wide open windows, or the windows may be removed. Essential points are complete rest in bed in the position most comfortable to the individual case—usually semi-recumbent—the prevention of over excitement, and absence of worry and anxiety. The blanket bath is usually most acceptable in the morning, as night sweats are common, and then a light sponge is given in the evening, but there should be no hard and fast rule about this. The patient may be too exhausted in the morning to enjoy what at another and more suitable time he would find refreshing. Special attention must be given to all pressure points, and if necessary a water bed should be used.

### PRIZE COMPETITION QUESTION FOR MONTH.

What is Cæsarian Section? What are the indications for this operation? How would you prepare for it, and to what points would you pay special attention during the operation and subsequently?

#### NOTICE.

Competitors for our Prize Competition are asked to note that the number of words in articles submitted should be from 750 (not 700) to 800.

## PATHOLOGICAL SPECIMENS.

### COLLECTION AND PRELIMINARY TREATMENT OF SURGICAL SPECIMENS.

# By W. J. HATCHER,

Laboratory Technician, County Hospital, Farnborough, Kent.

Successful specimen mounting and the preparation of good sections for microscopy depend very largely upon suitable preliminary treatment of the specimen. If this be inappropriate or delayed, the correct and delicate shades of colour in the specimen will be lost, never to be recovered, and the value of the specimen as a mount proportionally decreased. No matter how skilled the laboratory worker may be, he can never quite restore the true to life colours so essential in a teaching specimen.

It must, of course, be realised that there is another side to the question—nobody deliberately destroys valuable specimens; but the theatre staff, often working shorthanded, have little time to spare for the finer points of pathological technique, and it is obvious that specimens in general must await the comparative leisure of " clearing up" time. However, with the sympathetic cooperation of Theatre Sister, arrangements may often be made to collect specimens at suitable intervals during operating time, relieving the theatre staff of an irksome responsibility and permitting early and correct treatment of the specimens.

Specimens removed at operation may be required for at least two possible purposes-the first is sectioning and microscopical examination; this is essential in all malignant or suspected malignant conditions, and indeed now in most large hospitals, microscopy is carried out as a routine on all material removed in the theatre. Secondly, a selected few specimens are permanently preserved as museum mounts; for both of these purposes the preliminary treatment is the same, that is, immediate and adequate fixation. There is, it is true, another class of investigation occasionally undertaken ; this is, of course, bacteriological examination, and it cannot be too often repeated that tissue intended for this purpose must not be fixed by placing in formalin, but should be kept in a sterile container. Neglect of the obvious is painfully frequent, and every so often a specimen will arrive at the laboratory for bacteriological examination after it has been kept in formalin probably overnight. Formalin-a powerful disinfectant-will have killed all the bacteria present; bacteriological examination, possibly the main object of the operation, would be quite impossible. It is, perhaps, rather unnecessary to remark that the nursing staff are not alone responsible for these errors-dressers and unthinking medicals are the principal offenders, but usually Theatre Sister appears to get most of the subsequent blame.

### LABELLING THE SPECIMEN.

It is obviously highly important that all surgical material sent for laboratory investigation should be correctly and fully labelled. The following information should always be given: Patient's name, age, ward, number, date of operation, investigation required, nature of material sent, and provisional diagnosis. The results



